MAR 2 2 '55

HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE

UNIVERSITY OF MARYLAND
LIBRARY
Founded 1813
SCHOOL OF MEDICINE

Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/missourimedicine5011miss

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

JANUARY, 1953

VOLUME 50, NUMBER 1

Scientific Articles:

CONGENITAL DEFORMITIES OF THE HANDS AND FEET, F. X. Palletta, M.D., St. Louis 19

CORTISONE IN THE TREATMENT OF STRICTURES OF THE HUMAN MALE URETHRA, John E. Byrne, M.D., St. Louis 23

THE CULPABILITY OF THE HOMOSEXUAL, Nathan Blackman, M.D., St. Louis 27

INCREASED INCIDENCE AND DEATH RATE IN DIPHTHERIA AND PERTUSSIS, Thomas L. Dwyer, M.D., Mexico 30

DIGILANID AS COMPARED TO THE POWDERED LEAF OF DIGITALIS IN CONGESTIVE CARDIAC FAILURE, Joseph B. Wolffe, M.D., and Anthony D. Dale, M.D., Philadelphia, Pa. 32

Postgraduate Review:

RECENT ADVANCES IN THYROID PHYSIOLOGY AND TREATMENT, J. Lerman, M.D., Boston, Mass. 35

Case Report:

ESOPHAGEAL LEIOMYOMAS: SURGICAL TREATMENT, Harrison H. Shoulders, Jr., M.D., St. Louis 49

ULCERS: THREE TIMES PERFORATED, Robert W. Smith, M.D., and Paul T. Berry, M.D., Marceline 51

Curiosa et Trivia 5
Guest Editorial 6
With Our G. P.'s 8
Capsule Clinics 8
Forty Years Ago 10
Our Auxiliary 10
What Is Your Hobby, Doctor? .. 12
Crossroad Comment 12
Division of Health 14
Progress Notes of Prepayment Plans 14
President's Comments 16
Others Say 16
Editorials 54
Fraternally Yours 56
Meetings and Musings 57
News 58
New Members 60
In Memoriam 60
Councilor District News 61
Your Patients Hear and See .. 64
Your Patients Read 64
We Go to Press 64
Sex and the Modern Medicine .. 66
Others Say 66
New Drugs 68

New Year's Resolution: Make MISSOURI MEDICINE a MUST on your reading list

in the hands of the physician

Often the critical evaluation of the drug to be administered is as important to the patient's recovery as is the diagnosis of his condition. In each case correct procedures can be determined only by the physician.

CHLOROMYCETIN is eminent among drugs at the disposal of the medical profession. Clinical findings attest that, in the hands of the physician, this widely used, broad spectrum antibiotic has proved invaluable against a great variety of infectious disorders.

Chloromycetin®

notably effective, well tolerated, broad spectrum antibiotic

The many hundreds of clinical reports on CHLOROMYCETIN emphasize repeatedly its exceptional tolerance as demonstrated by the infrequent occurrence of even mild signs and symptoms of gastrointestinal distress and other side effects in patients receiving the drug.

Similarly, the broad clinical effectiveness of CHLOROMYCETIN has been established, and serious blood disorders following its use are rare. However, it is a potent therapeutic agent, and should not be used indiscriminately or for minor infections—and, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

UNIVERSITY OF MARYLAND
LIBRARY
Founded 1813
SCHOOL OF MEDICINE

Curiosa Et Trivia

William B. McCunniff, M.D.

Clinical Note: Dr. A. C. Richmond, Ft. Madison, Iowa, reporting the progress of a case: "Robert S., age 18, acute tonsillitis, temperature 104, very septic sore throat. The next day: still very ill, giving him the moldy bread with aspirin in capsules . . . three capsules four times a day. Next day: improvement is unbelievable. I shall give all my patients with fever and infections mold. If I should tell the other doctors about this, they would think I am crazy." Not amazing in these days of antibiotics, you say? The date? September 9, 10, 11, 1900.

Modern Psychiatric Concept: Alcoholics should be treated as sick people, not as criminals. The same philosophy was enunciated nearly two thousand years ago by the Roman, Ulpian (A. D. 170-228).

"It's a shame they aren't paid," vowed retired street car conductor Harley J. Davis, so he left $138,000 to student nurses at Lutheran Hospital, Ft. Wayne, Indiana. This provides $150 for each student nurse now in training and $100 for each year of training completed by new nurses.

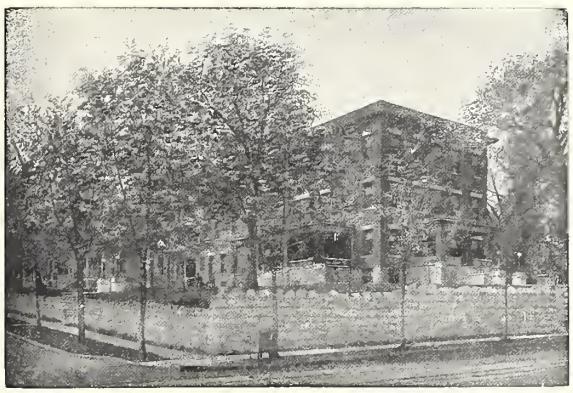
"The total insane population of Jackson County now is 1,479 persons . . . which is about its maximum share permitted under statutes." *Kansas City Star,* October 27, 1952.

How brilliant and courageous can one man be? Dr. William S. Halsted is considered to be "the first . . . to administer successful direct blood transfusion, by the syringe method," since he transfused his own sister who was dying of postpartum hemorrhage. Later the same month, in 1881, referring to his mother: "I operated her at 2:00 a. m., incised the gall bladder which was distended with pus and extracted seven stones." Again, reportedly one of the first cholecystostomies for suppurative cholecystitis. But for all of this, he is quoted as saying, "Surgery would be delightful if you did not have to operate."

THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well Equipped Institution for the Treatment of Nervous and Mental Diseases and Alcohol Drug and Tobacco Addictions



Beautiful Location Large, Well Shaded Grounds, Spacious Porches, All Modern Methods for Restoring Patients to a Normal Condition

Elderly People Accepted—Special Rates

HERMON S. MAJOR, M.D.
Medical Director

HERMON S. MAJOR, JR.
Business Manager

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Printed by The Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri.

Guest Editorial

Louis H. Bauer, M.D.
President, American Medical Association

I am happy to extend greetings to the Missouri State Medical Association. I recall with pleasure my visit to your Annual Meeting in 1952.

The Missouri Association is an important link in the chain of the American Medical Association.

Louis H. Bauer, M.D.

The American Medical Association is an organization operated by its members. I find, in going about the country, that far too many members of the Association are unfamiliar with its operation and its activities.

Its activities cover every aspect of medicine and the environment of medical practice in this country today is due to the American Medical Association. The fact that we have none but high grade medical schools in the United States is due to the Association's campaign to raise the standard of medical education here.

The activities of our various Councils have set high standards for therapeutic agents and apparatus. Our Bureau of Investigation has waged constant war against charlatanism, quackery and nostrums. We have set standards for industrial health, are aiding in improving rural health and are furthering voluntary insurance. The very fact that we are practicing in a free state is due to the association's campaign against compulsory health insurance.

The individual member has direct access to the House of Delegates, which, incidentally, is elected by you and the members of other states. All reports, resolutions and memorials to the House of Delegates are referred to Reference Committees and any member, whether or not in the House, can appear before a Reference Committee and argue for or against any particular subject under consideration.

The Headquarters and officers of the American Medical Association are sometimes referred to as a "hierarchy." The Board of Trustees and the officers are elected by the House on nomination (except in the case of the Treasurer), from the floor. Officers are elected for one year, Trustees for five years. Each Trustee is entitled to one reelection. I was first elected to the Board in 1944, and when I became President-Elect in 1951, there was not a single member of the Board still on it who was there when I was first elected. What sort of hierarchy is that?

In any large organization there will be differences of opinion. The organization would be useless if there were not. Remember, however, that no organization is ever going to adopt any policy which is at variance with the opinion of the majority of its members. Work from within the Association, and not from without it.

Just as the American Medical Association has been fighting your battles on a national level, so the World Medical Association has been fighting them on the international level. We are faced with danger from abroad through the International Labor Organization. This organization is trying to force compulsory health insurance or government controlled voluntary insurance on every member country, and the United States is one of them. The World Medical Association has drafted a document on this subject which has been circulated all over the world. It was printed in the *Journal of the American Medical Association* for May 31, 1952. If you have not read it, you should do so.

We have found in the World Medical Association that whenever a country does not have a strong national medical association, that medical education and medical care are at a low level in that country.

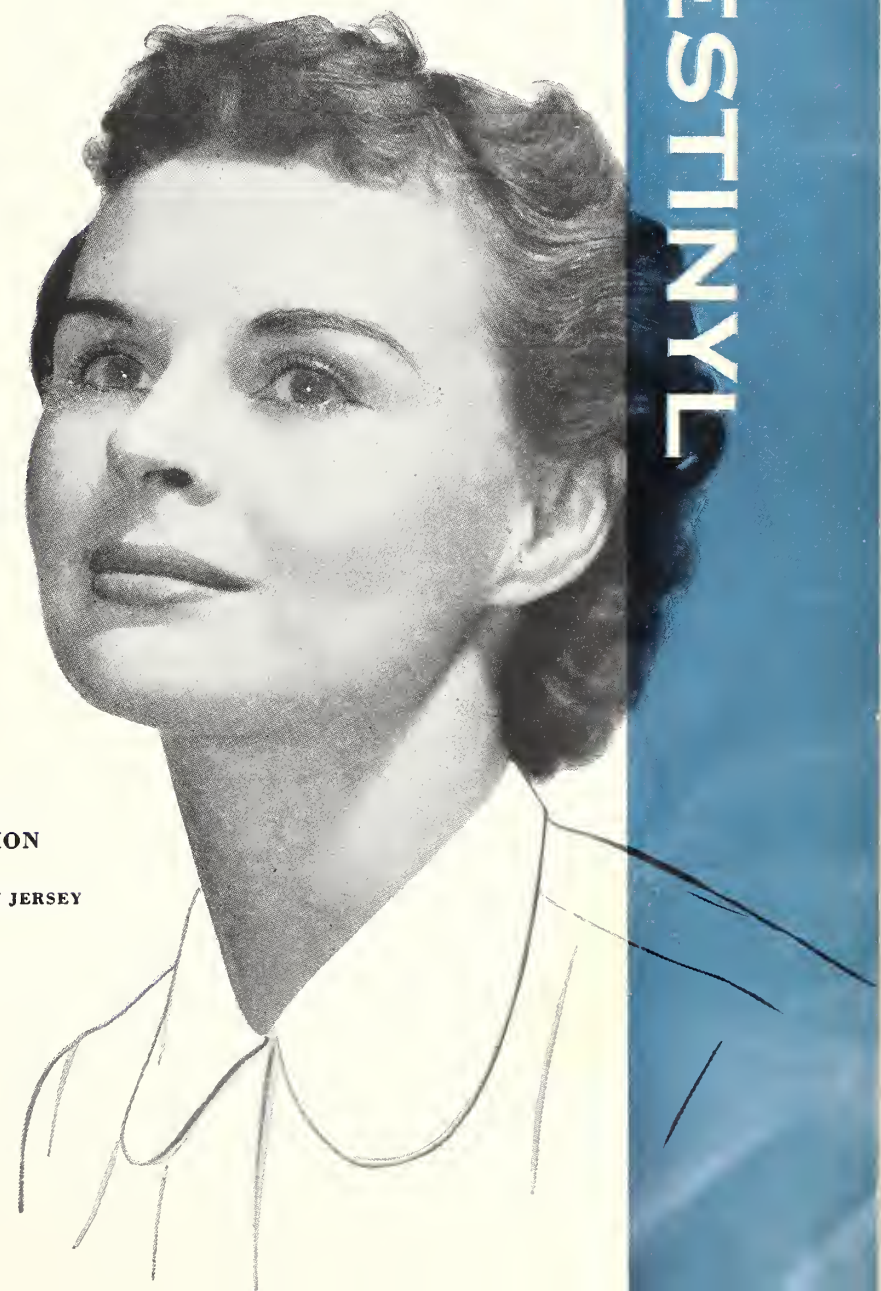
So give your unlimited support to your national association and to the World Medical Association and help keep medicine at a high level and free from interference in the United States.

We must drive home the point that there is still a third side of medicine. We are going to have to learn to practice not only the science and art of medicine, but the citizenship of medicine. We are going to have to do away with the notion in some doctors' heads that to be a citizen is to be a medical politician, which is a very, very bad thing.

We must bridge the gap between the specialist and our general practitioners. When we reach the point that our specialists and our various allied associations and the many scientific meetings over the state are all tied together to one common end, and that end the welfare of American medical practice, then surely we will have reached Mirvana insofar as the health care of our people is concerned.—T. C. Terrell, M.D., President, Texas Medical Association.

An Unsurpassed Estrogen Therapy

Small dosage makes ESTINYL inimitable among orally effective estrogens. As little as *two hundredths of a milligram daily* relieves menopausal symptoms and produces a sense of well-being obtainable only with larger doses of other estrogens.



ESTINYL

ESTINYL®

(ethinyl estradiol-Schering)

Available for treatment of menopause and other estrogen deficiency states, in tablets of 0.02, 0.05 and 0.5 mg.

Schering CORPORATION

BLOOMFIELD • NEW JERSEY

With Our G. P.'s

William J. Shaw, M.D.

The general practitioner, acknowledged keystone of the medical profession, has gone back to school. This month will complete the fourth annual postgraduate program presented by the Missouri Academy of General Practice for the rural physicians of Missouri.

William J. Shaw, M.D.

Beginning with one course in 1949 and increasing in number annually, the Academy has presented in 1952-1953 nine programs simultaneously in nine communities. Including the more formal courses given in the larger centers of the state, it truly may be said that no physician in Missouri lacks access to adequate post-graduate instruction.

Instructors for the ninety presentations were obtained from medical school staffs of Washington University, St. Louis University, University of Missouri and University of Kansas. The courses were coordinated by the respective medical school deans, state medical associations, and the Missouri Academy of General Practice through the effort and efficient labor of the Missouri Academy Education Committee, and Field Secretary of the Missouri Academy of General Practice and the State Medical Association.

Cities in which meetings were held and physicians in charge of courses were: Cape Girardeau, E. D. Campbell, M.D.; Springfield, Kenneth Knabb, M.D.; Kennett, Paul Baldwin, M.D.; Chillicothe, Donald Dowell, M.D.; Warrensburg, O. H. Damron, M.D.; Nevada, Roy Pearse, Jr., M.D.; Rolla, M. K. Underwood, M.D.; Louisiana, Ray Johnson, M.D., and Columbia, E. R. Bohrer, M.D.

These courses are open to all ethical Missouri physicians. It is hoped that a tabulation revealing attendance for the year will soon be available.

Capsule Clinics

Irving A. Wien, M.D.

- Cancer of the stomach heads the list of causes of death from cancer in all parts of the body. Covert, F. M., and Brindley, G. V.: Surgical Clinics of North America 32, October 1952.

- It is now quite generally accepted that the origin of cancer of the thyroid gland is in the preexisting adenoma of the gland. Lahey, F. H., and Hare, H. F.: Journal of American Medical Association 145, March 10, 1952.

- Chronic cervicitis is one of the commonest of gynecologic lesions. Te Linde, R. W.: Operative Gynecology, J. B. Lippincott Co., Philadelphia, 1946.

- The initial and key figure in cancer control is and always will be the practicing physician. The Cancer Bulletin July-August 1952.

- New victims of blindness total 30,000 each year. Pennsylvania's Health 13, January-March 1952.

- In coronary arteriosclerosis the earliest sclerotic lesion is characterized by proliferation of subendothelial fibroblasts, increased amounts of mucoid substance, and fragmentation of the internal elastic membrane. Moon, H. D., and Rinehardt, J. F.: Circulation 6, October 1952.

- Efocaine injected into the anterior and posterior pillars following tonsillectomy controlled postoperative pain to a very high degree for 5 to 6 days in 45 patients. Penn, S. E.: Archives of Otolaryngology 56, July 1952.

- Discography is the demonstration of the nucleus pulposus roentgenographically by direct puncture of the disc with a fine needle and the injection of a radiopaque substance. Cloward, R. B. and Buzaid, L. L.: American Journal Roentgenology, Radium Therapy and Nuclear Medicine 68, October 1952.

- Postspinal headache treated by intravenous administration of a solution of 5 per cent ethanol in 5 per cent glucose in distilled water resulted in lasting relief for most of the patients treated. Deutsch, E. V.: Anesthesiology 13, September 1952.

- The basic principles of the treatment of cardiac arrest are artificial respiration with 100 per cent oxygen and cardiac massage. Campbell, W. A.: Journal of International College of Surgeons 18, September 1952.

- Takayasu's disease (pulseless disease) is characterized by loss of radial artery pulsations, abence of detectable blood pressure in the arms, and the formation of arteriovenous anastomosis and cataracts. Caccamese, W. C., and Whitman, J. F.: American Heart Journal 44, October 1952.

- There is general acceptance of the experimental evidence that leukemia may be produced in susceptible species of animals by exposure to roentgen irradiation. Folley, J. H.; Borges, W., and Yamawaki, T.: American Journal of Medicine 3, September 1952.

Salt is what makes things taste bad when it isn't in them.*

Most people find foods unappealing and insipid without salt. Therefore, when salt restriction is indicated, the patient must be impressed with the importance of a salt-free diet and must adhere faithfully to a rigid regimen. "With the development of such preparations as Neocurtasal . . . the problem of palatability and a salty taste has been fairly well solved . . ."[1]

Neocurtasal®

". . . trustworthy nonsodium-containing salt substitute"[2]

—lends the desired salty flavor to foodstuffs, and can be used in all salt-free and low sodium diets.

CONSTITUENTS: Potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate and starch.

and

NEOCURTASAL
Iodized

(contains potassium iodide 0.01%)

Neocurtasal, trademark reg. U. S. & Canada.

Neocurtasal looks and pours like table salt and may be used in the same manner.

Both available in 2 oz. shakers and 8 oz. bottles.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

1. Merrymon, M. P.: The Use of the Low Sodium Diet. *South Dakota Jour. Med. & Pharm.*, 2:57, Feb., 1949.
2. Heller, E. M.: The Treatment of Essential Hypertension. *Canad. Med. Assn. Jour.*, 61:293, Sept., 1949.

*Author unidentified. From Mencken, H. L.: A New Dictionary of Quotations. New York, Alfred A. Knopf, 1942, p. 1057.

Forty Years Ago

Clyde P. Dyer, M.D.

January, 1913: Assistant-resident in St. Louis City Hospital at $50 per month . . . horse and buggy days—a few automobiles . . . 10 cent hamburgers . . . rent in Metropolitan Building $15 a room . . . Missouri State Medical Association dues $5—plus $2 for St. Louis County Society members . . . A.M.A. Directory $7, Blair's "Surgery of Mouth and Jaws" $5, Hirst "Obstetrics" $5 . . . Philadelphia's Rittenhouse Hotel rate $1.50, American plan $4. . . .

Clyde P. Dyer, M.D.

Full pages of Kansas City physicians in the State Journal listing their hours and specialties . . . (a good plan even for today) . . . major controversy over proposed law licensing opticians as optometrists . . . introduction of Employer's Liability and Insurance and Physicians Fees Bills in the State Legislature . . . common drinking cups on all interstate trains prohibited by U. S. Public Health Board. . . .

A.M.A. President, Dr. Abraham Jacobi, New York City; President-elect Dr. John A. Witherspoon, Nashville . . . MSMA President, Dr. R. M. Funkhouser; Secretary, Dr. E. J. Goodwin, both of St. Louis . . . 29 Councilors and Districts in the Association. . . .

Osteopaths demand that the St. Louis Municipal Assembly permit them to practice in the city institutions. . . .

Annual A.M.A. Session this year in Minneapolis, followed by conducted tour of Yellowstone National Park . . . 30 States represented at Conference of State Medical Society Secretaries at Chicago last October. . . .

Last MSMA meeting in Sedalia passed resolutions against medical journals that carry false and fraudulent medical advertisements . . . asked profession to refuse to subscribe to such journals until their advertising pages had been cleared of such ads.

Our Auxiliary

Mrs. Richard (Betty) Sutter, *President*

May we express our thanks for this generous opportunity afforded us to acquaint the physicians of Missouri with the program and progress of their Auxiliary in these pages.

Mrs. Richard (Betty) Sutter

When the Auxiliary to the A.M.A. was organized in St. Louis in 1922 it stated aims were "to assist the A.M.A. in its program for the advancement of medicine and public health, and to cultivate friendly relations and promote mutual understanding among physicians' families." For many years some Doctors have felt the Auxiliary was a sort of pink tea—sewing circle sort of gathering. Today, however, they realize that the Auxiliary is a great deal more interested in socialism than in socials.

Throughout the country Doctors are profuse in their tributes to the part the Auxiliary has played in awakening the public at the grass roots level to the implications of Fair Deal legislation affecting the profession. The Missouri Auxiliary has fought compulsory health insurance throughout the state and is proud of its program of Public Relations meetings, community health meetings, radio programs, nurse recruitment, cooperation with voluntary health organizations and with voluntary prepayment medical and hospital care plans, civil defense, American Medical Education Foundation, distribution of *Today's Health,* and its own Missouri Medical Student Loan Fund.

In subsequent articles we hope to explain more fully the various activities of your wives in the Auxiliary. We will enjoy your comments and suggestions, both on the articles presented and on the program of the Auxiliary.

Mothers will thank you

Swallowed Whole

Chewed
Or in Food Or Liquid

Dissolved on Tongue

NEW FLAVORED

CHILDREN'S SIZE

BAYER ASPIRIN

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc.
1450 Broadway, New York 18, N. Y.

- The Best Tasting Aspirin You Can Prescribe.
- The Flavor Remains Stable Down to the Last Tablet in the Bottle.
- 24 Tablet Bottle . . . 2½ gr. each 15¢

2½ gr. 1¼ gr.

Grooved Tablets—
Easily Halved.

What Is Your Hobby, Doctor?

"Ship-Ahoy!" the Sailors Sutter

Many land-locked Missourians must envy Richard Sutter (St. Louis) and his family. Their yacht, "Lady Betty"—named for Mrs. Sutter, President of the State Auxiliary—provides them with a weekend retreat eight months each year.

And, unlike a cottage (or similar refuge), the Lady Betty always intrigues them with a new view just around the next bend in the river.

To the skipper and his crew (besides his "mate," there is John, 16, Jane, 13, and Judy, 10), each Saturday and Sunday is an awaited for pleasure, not always devoid of thrills. For instance, their "long weekend" of Thanksgiving 1950, was featured in the magazine, *Lakeland Yachting,* (February, 1951) with the title, "Below Zero, My Trip from St. Louis to Kentucky Lake." From the photographs and description, the ice, snow and blizzard conditions made this anything but a prosaic voyage. At times, even the skipper confessed temporary misapprehension.

"Lady Betty" was the first St. Louis owned boat to negotiate the North Channel, in Canadian waters, via Lake Huron. But this stout 40 foot craft, powered by two 108 horse-power motors, with all the best in equipment, made the trip in good shape. This Georgian Bay territory is considered the finest yachting area in North America, particularly in a craft which has been storm tested with wind velocity up to 100 m.p.h., and with other equally nerve-shaking experiences.

"Dick" Sutter rates a membership in the Coast Guard Auxiliary, has hauled in three capsized sailboats, and is Past Commodore of the Harbor Point Yacht Club, St. Louis. As a licensed radio operator (under F.C.C.) he has served as Communications Officer with the Coast Guard Auxiliary.

Apparently the boating "bug" has bitten deeply the entire Sutter family, for last summer son John "jumped ship" at Muskegon to serve for two months as an "able seaman" on another vessel cruising the Great Lakes. Even their toy Chihuahua, "Chi-Chi," seems to enjoy heavy weather.

When "Skipper" Sutter was asked the "why" of his hobby, he said, "Yachting has been described as an escape. You certainly feel miles away from the workaday world when out on the water. The rivers are the only natural frontiers left on this continent, being much the same as when first seen by such explorers as Pere Marquette in 1673. Yet, if you ever entertain notions of self-importance, battling with Lake Michigan will reduce you to size."

(We have material for several of these features. However, it all emanates from St. Louis or Kansas City. We invite leads on other members who have unusual hobbies from different areas in the state. Please help us visit around. V.T.W.)

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

Had to go out to Schroughneck (thats an area about twenty miles from here) and see a feller with a pain in his belly about two AM last night. On the way back I got to thinking and got damned aggravated. Especially since it was the fourth or fifth time I had seen him in the middle of the night.

He is one of these veterans who gets home treatment for his service connected ulcer that he had before he went into the service. Come to think about it, I suppose maybe his marginal ulcer is service connected. It didn't come until after he had his gastroenterostomy that was done in a Veterans Hospital. Anyway I found out last night that he had been going to them for treatment as an out patient and had been to the new Vets Hospital in Kansas City that day. He got hungry on the trip home and ate a bowl of chili. I got my sleep disturbed.

You know what they told him? That he had better leave those country doctors alone and stick with them. No sir, it just ain't good to be changing doctors so often. To that I agreed. The next time he gets a pain in his belly at two AM I know a bureaucrat that is going to get his sleep disturbed. Its only a hundred miles from the city down here and I am sure he is devoted enough to his patients to make one little old house call.

Who knows, maybe he will develop a service-connected ulcer.

Your aggravated nephew,
PETE

still winning new friends

right through the menopause

on oral estrogen therapy that imparts

no odor or after-odor, no taste or after-taste

YOUR prudent and assuring explanations will help—clearing away the jungle of her doubts and fears. Then SULESTREX will help—in controlling the physical symptoms of the climacteric.

Years of search have given you SULESTREX—an odorless, absolutely pure, crystalline estrogen, chemically standardized for unvarying hormonal activity. Unexcelled—therapeutically *and* esthetically—these tiny uncoated tablets will never insult the breath or perspiration, never annoy with "after-taste."

A new report by Reich and associates[1] confirms and extends his conclusions from his pilot study[2]...

"*Piperazine estrone sulfate* (SULESTREX) *is a clinically effective oral estrogenic substance, easy to administer and extremely well tolerated. Its action is accompanied with an amazingly low incidence of side reactions.*"

175 patients were included in this latest study, 50 of whom received therapy to relieve postpartum breast engorgement.

Make your own test—on your next menopausal patient. One trial will give impressive argument for this newest advance in oral estrogen therapy. SULESTREX is available in 0.75-, 1.5-, and 3-mg. grooved tablets.

Abbott

Sulestrex®

piperazine tablets

(PIPERAZINE ESTRONE SULFATE, ABBOTT)

1. Reich, W. J., et al. (1952), A Recent Advance in Estrogen Therapy. II. Amer. J. Obst. & Gynec., 64:174, July. 2. Reich, W. J., et al. (1951), A Recent Advance in Estrogen Therapy. I. Amer. J. Obst. & Gynec., 62:427, August.

A81

Division of Health

James R. Amos, M.D., Director

The Division of Health has broad duties and responsibilities. Much work is devoted to those duties required by law, regulation or established custom to the extent that it might appear that little time or funds are left to do a complete health program. Since it is necessary to curtail some activities it then becomes essential that careful selection of objectives be made upon which emphasis will be placed in order to attempt a more adequate public health program. Some of these objectives are:

1. A better and more inclusive sanitation is in operation. In the past stress has been placed on the fields of safe water supply and sewage disposal. Legislation requiring inspection and licensing nursing homes and tourist courts has placed a focus of attention in these areas. Milk sanitation has called for increased efforts from the Division of Health in order for Missouri's milk industry to expand into other states. There has been progress in other food control, especially eating establishments, but, due to the magnitude of this job, there is still much to be done. It is in this particular realm of sanitation which we wish to place special effort. Also the whole area of refuse disposal, sewage, garbage, industrial waste, and stream pollution require a definite and concise program to keep abreast of good public health.

2. Efforts toward promoting fluoridation of communal water supplies are being made. Perhaps this is the most outstanding measure in recent years for a preventive program in health if we consider the overwhelming prevalence of dental caries in the nation and then the ease and small cost needed to combat one half of the problem.

3. Mental health education is the need of the century. It is an accepted and popular program among influential organizations such as schools, Parent Teachers associations, farm organizations and civic clubs. We are integrating mental hygiene work into all health education programs through our public health nurses and our health educators.

4. To meet the legal requirements concerning the certification of births and deaths, issuing copies and with all of the necessary correspondence, recording and filing of the approximately 170,000 records annually, it takes practically all of the time and money allocated to the Bureau of Vital Statistics. The service is a definite and valuable one to the people of the state but, in addition to the legal requirements, the Bureau should be able to provide data to help in planning and promoting an acceptable health program. It does give a basis from which to start and, with some additional help, invaluable health statistics can be obtained for the many agencies over the state who are interested in certain phases and who are asking for the information as well as assisting health departments in planning their work.

5. The modern public health laboratory of today is invaluable to a sanitation program. It is necessary to do milk and water bacterial counts, food cultures, swab counts of utensils and dishes and even some sewerage laboratory work. This is a phase of public health laboratory work in which we must keep abreast and in which we propose to do so.

Time and space does not allow for details in expressing these objectives, nor to list others. Suffice it to say that these are current objectives for emphasis, subject to be replaced in importance as they become more fully realized, or as others may inject themselves more forcibly.

Progress Notes of Prepayment Plans

(Kansas City Blue Cross-Blue Shield)

To help everyone get better acquainted with Blue Shield and its benefits, a Professional and Public Relations Committee has begun to function. Its chairman: James A. Jarvis, M.D.; its duties: relationships with physicians, relationships with the public, establishing fees for new procedures and revising fees where needed.

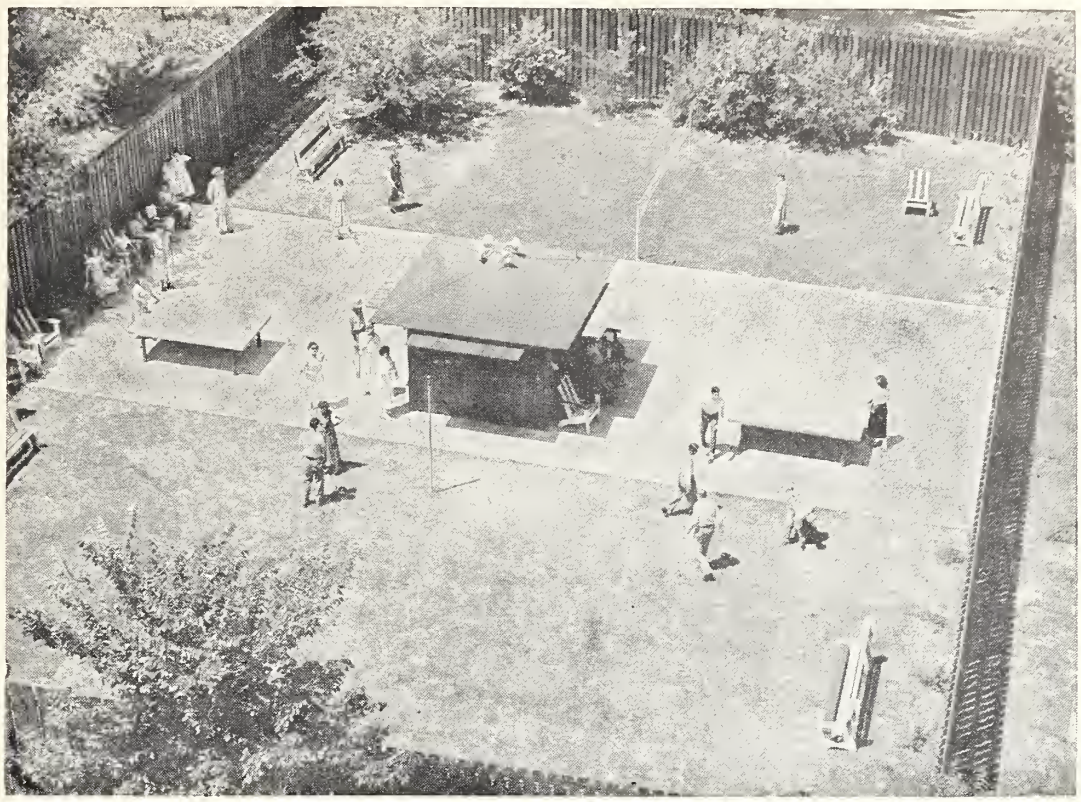
Composed completely of physicians, the committee welcomes communications from all doctors. A similar Blue Cross committee has operated effectively for some time.

In October 1952, Terramycin was added to the list of drugs covered without limit for hospitalized Blue Cross members.

Following a speech in Kansas City last May by John Cline, M.D., 1951-1952 President of American Medical Association, Blue Cross and Blue Shield committees, working jointly, began a study of "catastrophic" coverage—prepayment protection for care beyond the benefits now provided.

Their work is expected to open a new area of protection from high costs of long illnesses.

In June 1952, 6,000 new members were added in Kansas City's fourth nongroup enrollment. Like the first three, this campaign was open to everybody, regardless of age or employment. Total for all four enrollments is nearly fifty thousand.



Outdoor Recreation Area

In psychiatric therapy recreation is not only "therapy", but play as well. It is important that patients have a chance to get out of their sleeping rooms. The new recreation area at the Neurological Hospital offers almost every patient within a few days after admission, a chance "to get out of the sleeping areas".

Inquiries may be directed to the hospital or to the individual psychiatrist.

Sylvia Allen, M. D.
Edward E. Baumhardt, M. D.
Marvin L. Bills, M. D.
John D. DeMott, M. D.
Merrill T. Eaton, Jr., M. D.
B. Landis Elliott, M. D.
Louis H. Forman, M. D.
Paul Hines, M. D.
Morton Jacobs, M. D.
Milton E. Kirkpatrick, M. D.
Frank J. Koenig, M. D.
Louise B. Loewy, M. D.
Albert Preston, Jr., M. D.
G. Wilse Robinson, M. D.
G. Wilse Robinson, Jr., M. D.
William F. Roth, Jr., M. D.
A. Theodore Steegmann, M. D.
E. H. Trowbridge, Jr., M. D.
James E. Young, M. D.

The Neurological Hospital Association

2625 WEST PASEO
KANSAS CITY 8, MISSOURI

President's Comments

"Now is the time for all good men to come to the aid of their party." The old adage is just as applicable today as it ever was. Our Missouri legislature will go into session immediately following the inauguration of our new Governor, Phil M. Donnelly, on January 12, 1953.

The State Senate will be composed of eighteen Democrats and sixteen Republicans. The veteran St. Louis legislator, State Senator Michael Kinney, will be the President pro tem.

The House of Representatives, composed of eighty-five Republicans and seventy-two Democrats, met on November 21 and the officers chosen. Representative Lester A. Vonderschmidt, Mound City, Holt County, was selected to be Speaker of the House. Other officers chosen were Representative Charles J. Fain, Taney County, Speaker pro tem; and Representative Christian Stipp, Carroll County, Majority Floor leader. The Democratic minority has not made its selections, though Representative Roy Hamlin, Marion County, is expected to be minority floor leader.

Information about legislation affecting the practice of medicine during the session will be supplied by the Community Health League of Missouri. You are urged to read the bulletins and to consult with your legislators regarding legislation.

J. William Thompson M.D.

Others Say

The Physician and Surgeon

It is our responsibility to advance the treatment of surgical disease by whatever means appears to be fruitful. We must be aware of, and utilize the tools of, the fundamentalists, applying them to our clinical problems. In order to do this most effectively, we must school ourselves and our surgical residents in the investigative atmosphere, as exemplified by the medical philosopher, emphasizing the importance of the fundamental sciences to the detailed understanding of surgical disease.

It is apparent that the day of the surgeon who is purely a technician and not a physician in a broad sense is passing. Let us hasten its passage. Fostering a union of the qualities of the man of action with the outstanding attributes of the physical philosopher will produce a oneness which exemplifies the outstanding surgeon.

Such an individual thoroughly schooled in surgical diagnosis and treatment, whose clinical ability is founded upon a firm basis of fundamental study, will exemplify in the broadest sense the true physician and surgeon.—B. W. Haynes, Jr., M.D.

"Emergency" Splenectomy?

There can be no question but that splenectomy must at times be performed as an emergency operation, notably in patients with injuries of the spleen or with spontaneous rupture. Aside from this indication, however, there seems to be a diminishing place for emergency splenectomy, even in such blood dyscrasias as acute fulminating thrombocytopenia of the "idiopathic" type and the hemolytic crisis.

It must be conceded that the rationale and, indeed, the actual need of splenectomy in both the acute hemolytic crisis and the acute hemorrhagic crisis are at present in a period of reassessment. Except for splenic rupture, it appears that emergency splenectomy is a thing of the past. With careful medical handling, which includes the use of various therapeutic agents mixed with a pinch of judgment and a good deal of patience, one can convert these apparent emergencies to quiet and relatively undramatic situations. When this has been done, the decision for or against splenectomy can then be carefully and perhaps more intelligently appraised.—C. Stuart Welch, M.D., and William Dameshek, M.D.

Editing a Bulletin

Some appear to think that running a bulletin is easy, but, from experience, we can say that it is no picnic because readers are hard to please.

If we print jokes, people say we are silly.

If we don't they say we are too serious.

If we clip things from other papers, we are too lazy to write them ourselves.

If we don't, we are stuck on our own stuff.

If we stick close to the job all day, we ought to be out hunting news.

If we do get out and try to hustle, we ought to be on the job in the office.

If we don't print contributions, we do not appreciate true genius; and if we print them, The Bulletin is filled with junk.

If we make a change in the other fellow's copy, we are too critical.

If we don't we are asleep.

Now, like as not, some guys will say we swiped this from some other bulletin.

And we did.—*Exchange.*

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1953, by Missouri State Medical Association. All Rights Reserved.

Vol. 50 January, 1953 Number 1

Scientific Articles

CONGENITAL DEFORMITIES OF THE HANDS AND FEET

F. X. PALETTA, M.D.
ST. LOUIS

Congenital abnormalities of the hands and feet have been classified by Kanavel[1] into three main groups: I. Hypoplasia, II. disorientation of tissue and, III. hyperplasia.

Examples of these three groups are seen in figure 1. Group I includes absence of the hand (acheiria), absence of one or more digits (ectrodactylism), and absence of one or more phalanges (hypophalangism). Group II includes syndactylism, cleft hand and congenital constricting bands. In group III are included polycheiria (multiple hands), polydactylism and polyphalangism.

Davis and German[2] grouped these deformities according to the degree of fusion and the presence of impaired bony growth. The term simple type is used when the phalangeal bones are normal, whereas the complicated type (fig. 2) indicates abnormal size, shape or number. When the fusion of the fingers (syndactylism) extends to the tips of the digits, the term complete is applied, and incomplete for fusion of lesser degree.

EMBRYOLOGY

Little has been added to the classical description of Bardeen and Lewis[3, 4] (1901) on the embryology of the extremities. The arm bud (fig. 3) appears as a swelling in the lower cervical region around the third week of fetal life. The border vein which later develops into the palmar volar arches is present at four and one-half weeks. At five weeks (fig. 4A) several centers of increased condensation corresponding to the carpal bones can be seen; and from the carpus, five masses of condensed tissue project which are to develop into fingers. The metacarpals and phalanges appear as distinct masses of cartilage during the sixth week. The ligaments and muscles of the hand are present in the seventh week (fig. 4B). Ossification of the metacarpals and phalanges occur between the seventh and twelfth weeks. The interdigital commissures rapidly deepen after this period.

Maccollum[5] has pointed out that the finger buds grow more rapidly than any other portion of the

Fig. 1. A. Absence of fingers in a child 1½ years of age. B. Absence of distal phalanges, second and third finger, webbing of incomplete fingers of opposite hand. C. Polydactylism, seven toes with corresponding metatarsal bones.

Presented at the 94th Annual Session of the Missouri State Medical Association, St. Louis, March 30-April 2, 1952.
Department of Surgery, St. Louis University School of Medicine.

appendages between the sixth and seventh weeks, and that this growth is so much faster than the tissue between them, that the webs of the fingers become completely obliterated. Interference or temporary arrest of growth during the seventh

Fig. 2. Complicated type with abnormal size and shape of fingers.

and eighth weeks may occur causing the fingers to retain their webs. Later in fetal life the finger buds that have retained webs grow at an even rate with the result that the fingers attain their proper length with webs still present.

The limb stalk growth is much slower than the hand in early fetal life and can be seen as a perfectly formed hand protruding from a very much foreshortened arm. Arrest in development

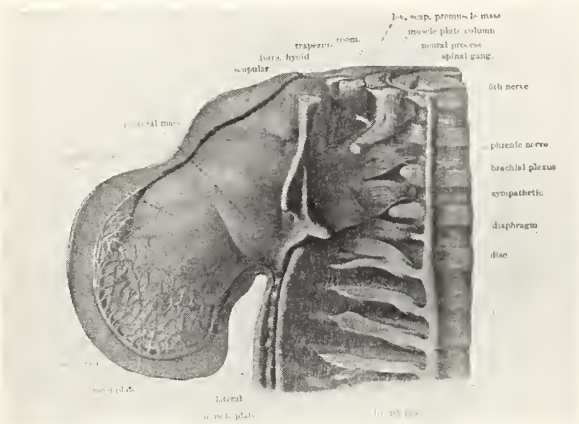


Fig. 3. Embryo, 4½ weeks, showing hand plate and border vein (anatomic specimen by Bardeen and Lewis.[3, 4]

at this stage has been indicated many times by the presence of a normal hand projecting from the shoulder girdle or by an extremely short arm.

The foot develops in a manner similar to the hand from the posterior limb bud. However, the development of the various structures is usually one week later than the corresponding parts of the arm.

COMPARATIVE ANATOMY

The excellent review of this subject by Strauss[6] describes syndactylism occurring in primates, insectivores and primitive marsupials. The following are examples of each: (1) Primitive marsupials, kangaroo, second and third toes webbed; (2) rodents, Beaver, toes completely webbed; (3) insectivores, moles, toes webbed, and (4) primates, monkeys, webbed fingers and toes.

ETIOLOGY

Ahfield Theory—This theory suggests that these deformities are caused by amniotic adhesions or bands. Cases of syndactylism associated with intra-uterine partial amputations of the fingers and toes, presumably caused by the presence of amniotic bands, have been reported by Assali,[7]

Fig. 4. A. Embryo, 5 weeks, five masses of condensed tissue which are to develop fingers (anatomic specimen by Bardeen and Lewis[3, 4]). B. Embryo, 7 weeks, ligaments and muscles of hand present (anatomic specimen by Bardeen and Lewis[3, 4]).

Deeg,[8] and Coleman.[9] These bands have never been demonstrated. Streeter[10] studied more than 8,000 specimens of the Carnegie Embryological Collection and found eight fetuses showing various stages of intra-uterine amputation. There was no evidence of amniotic bands in any of these cases. In fetuses of twelve to twenty weeks, Streeter described localized areas of necrosis

Fig. 5. Congenital constricting bands of fingers.

arranged in an annular manner resulting in sloughing of the part peripheral to it, or the formation of strands of fibrous tissue which may give the appearance of constricting bands (fig. 5). The primary cause was not apparent.

Germ Plasma Origin.—The greatest contribution to basic knowledge of this subject was the experimental work of Bagg.[11] He proved that congenital deformities may be produced by injury to the germinal cells. Mice were exposed to x-ray

and later bred. Some of the congenital deformities that developed involved the extremities. The mice showing these deformities were interbred and followed for nineteen generations. There were more than 5,000 mice studied in the inbred series and 413 foot defects were found. The earliest change noted was the presence of a blister-like bleb at the twelfth to the fifteenth day of fetal life followed by formation of blood clot. The extent of the pathologic process and its anatomic location determines whether the later developing hand or foot is to show either congenital amputation, clubbing or syndactylism.

It has also been suggested that the germ plasm may be affected by dietary deficiencies or by the acute infectious diseases of childhood when they occur in women during the first trimester of pregnancy.

Heredity.—The influence of heredity (fig. 6)

Fig. 6. A. Polydactylism in two brothers, same type with sixth finger. B. Same brothers with six toes.

is well known and there are many such cases reported. Cushing collected histories of 302 patients with congenital ankylosis of proximal and middle phalanges, 25.8 per cent were in one family. Deforest Willard reported lobster-claw hand in fifteen of twenty-two children in one family and in twenty-four of eighty in another family in three generations. Davis[2] reported that 18 per cent of their cases were hereditary.

INCIDENCE

Maccollum[5] reports that webbing occurs in one of every 2,500 newborn infants. Schurmeyer found eight cases of 20,000 men examined. In Maccollum's series 68 per cent were males and 32 per cent females which was quite similar to Davis' group in which 63 per cent were males and 37 per cent females. Maccollum also pointed out that 48 per cent showed involvement of both hands, and 35 per cent of the cases had toe deformities.

OPTIMUM TIME FOR OPERATION

Cases presenting a fusion of fingers of unequal length with a coherence of terminal phalanges on the same level should be corrected early or whenever the inequality of growth becomes apparent. If these fingers are not allowed to grow independently, secondary deformities will result. If the webs are loose allowing for normal out-

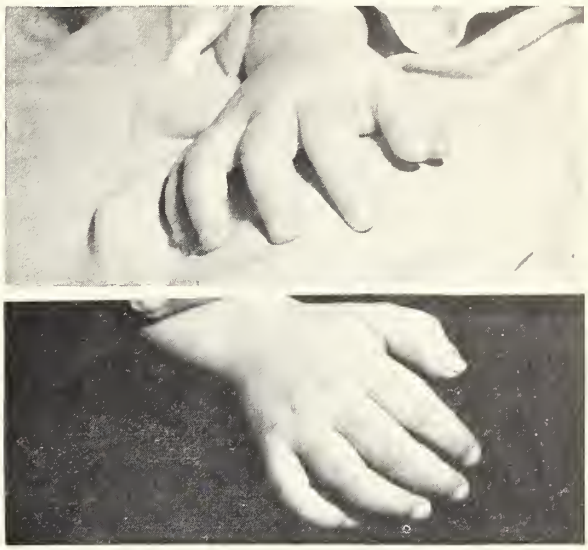


Fig. 7. A. Bifid thumb (case 1). B. Postoperative appearance for correction bifid thumb (case 1).

growth of the fingers, formation of wide commissures can be done at 4 years of age.

REPORT OF CASES

Case 1. The patient is a child, 3 years of age, with bifid thumb (fig. 7A). X-ray showed an extra phalanx articulating with a common proximal pha-

Fig. 8. A. Complete webbing of third and fourth fingers, palmar surface (case 2). B. Forsal view of webbed fingers. C. Postoperative palmar view, corrected webbed fingers (case 2). D. Postoperative appearance of web space (case 2).

lanx. The nail and extra phalanx were removed, saving the skin and suturing it to the radial side of the thumb (fig. 7B).

Case 2. The patient was 4 years of age and had a complete webbing (fig. 8A and 8B) of the third and fourth fingers. The webbing was released by multiple Z-plasties. Full thickness grafts were applied to the areas not closed with skin flaps. A deep, adequate

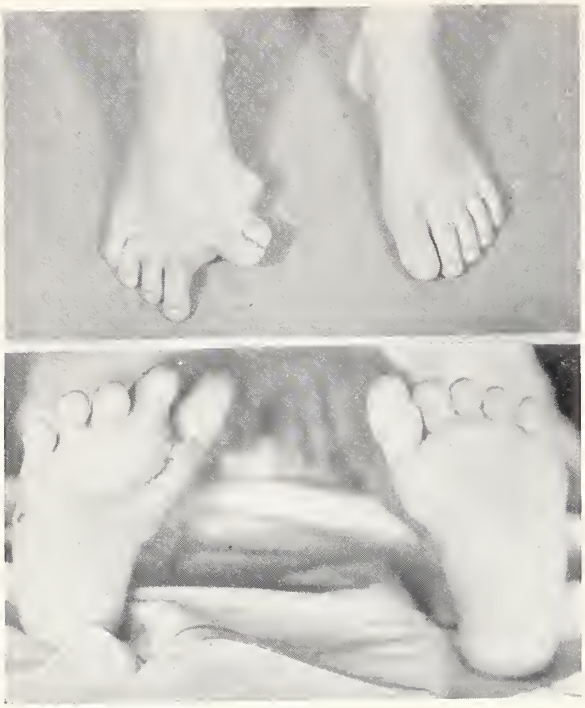


Fig. 9. A. Polydactylism foot, abnormal shape toes (case 3). B. Postoperative plantar surface ten days after operation (case 3).

web space is the criterion of a good result (fig. 8C and 8D).

Case 3. The patient was 9 years of age and had an extra great toe (fig. 9A). X-ray showed an extra metatarsal coming off at a 60 degree angle from the first, as well as phalanges in the extra toe. There was an unusually wide web space between the great toe and the second toe because of a deviated first metatarsal. The extra toe was removed

Fig. 10. A. Fusion of all four toes (case 4). B. Postoperative view; two operations, separation of all four fused toes (case 4).

and arthroplasty of the first metatarsal-phalangeal bones was carried out. The child was then able to wear a shoe (fig. 9B).

Case 4. The patient was a girl 10 years of age who had all the toes clumped together except the great

Fig. 11. Congenital constricting band of leg (case 5).

toe (fig. 10A). She was first seen because of an infected sinus tract. X-ray showed the presence of bony masses indicating that several phalangeal bones were present. In two operations, the toes were separated and full thickness grafts applied over the areas not covered by skin flaps. Result is shown in figure 10B.

Case. 5. The patient was a baby 3 months of age with a congenital constricting band of the leg (fig.

Fig. 12. Postoperative appearance, lateral view (case 5).

11). The foot was quite edematous and about twice the size of the normal foot. Z-plasty was done in three stages, excising the constricting fibrous tissue. The child is now 2 years of age and the tissue on the dorsum of the foot is no longer edematous (fig. 12).

DISCUSSION

Management of these cases requires the application of plastic surgical principles to correct the deformity present. There is no standard technic since each case presents a different problem. In

general, one attempts to obtain maximum function with what structures are available. Full thickness grafts and Z-plasties are frequently used since most patients do not have sufficient skin to effect closure. The use of the tourniquet is advisable to avoid injuring the small nerves, vessels and tendons. Fingers of unequal length that are fused distally and interfere with normal outgrowth of the fingers should be corrected promptly regardless of age. The most discouraging cases are those in which there is absence of all fingers or absence of the entire hand because there is so little one can offer them.

CONCLUSION

A classification of congenital deformities of the hands and feet is presented. The embryologic development of the hand and its relation to abnormalities is discussed. Various theories designed to explain these abnormalities are mentioned.

A number of surgically treated cases are presented to illustrate these theoretical considerations.

634 N. Grand Ave.

BIBLIOGRAPHY

1. Kanavel, A. B.: Arch. Surg. **25**:1-53, 1932.
2. Davis, J. W., and German, W. J.: Arch. Surg. **21**:32-75, 1930.
3. Bardeen, C. R., and Lewis, W. H.: Am. J. Anat. **1**:1, 1901.
4. Lewis, W. H.: Am. J. Anat. **1**:145, 1901.
5. Maccollum, D. W.: Surg., Gynec & Obst. **71**:782,789, 1940.
6. Strauss, W. L.: J. Morphol. **41**:427, 1925.
7. Assali, J. J.: Med de Bordeaux **51**:107, 1921.
8. Deeg: Beitr. x Clin. Chir. **126**:429, 1922.
9. Coleman, H. A.: J.A.M.A. **83**:1164, 1924.
10. Streeter: Quoted by Davis and German.
11. Bagg, H. J.: Am. J. Anat. **43**:167, 1929.

BOOK REVIEW

THORACIC SURGERY, by Richard H. Sweet, M.D., Associate Clinical Professor of Surgery, Harvard University Medical School. Illustrations by Jorge Rodriguez Arroyo, M.D., Assistant in Surgical Therapeutics, University of Mexico Medical School. W. B. Saunders Company, Philadelphia and London. 1950. Price $10.00.

This long awaited book describes and illustrates the technics which Dr. Sweet is using today in his chest surgery. Anatomy is stressed more than pathology and physiology of thoracic disorders. The entire first chapter is devoted to surgical anatomy of the chest.

Dr. Sweet describes his own procedures primarily rather than other persons in discussing diseases of the chest wall, pleural cavity, the diaphragm, the lungs and the mediastinum. Surgery of the heart, the great vessels and the esophagus are also discussed.

One section of the book deals with abdominal operations performed through thoracic incisions. Dr. Sweet's discussion of this will appeal strongly to the general surgeon.

The book itself is easy to read and is well illustrated by Dr. Jorge Arroyo. The illustrations are primarily sketches which were made by Dr. Arroyo in the operating room. J. L. L.

CORTISONE IN THE TREATMENT OF STRICTURES OF THE HUMAN MALE URETHRA

JOHN E. BYRNE, M.D.
ST. LOUIS

THE IDENTIFICATION of the crystalline hormones of the adrenal gland by Mason et al[1] in 1936 provided the wedge with which therapeutics entered a new era marked by its investigative vigor. Hench and Kendall[2] showed the initial clinical application of these substances in the treatment of rheumatoid arthritis in 1950. In the ensuing years thousands of publications have attested the wide range of biologic activity of both cortisone and ACTH.

One of the more interesting properties of the substance known as cortisone or compound E, is the apparent ability to interfere with the process of wound healing and repair.[3, 4, 5, 6, 7, 8] When this effect was initially observed it was attributed to the ability of cortisone to produce a nitrogen loss from the body. Baker and Whitaker[7] showed this action to be more or less specific by inducing delayed wound healing following the local application of cortisone to injured surfaces. They postulated that this action was due in some way to the ability of cortisone to alter the proliferation of the fibroblasts and the endothelium of the capillaries. Probing further into the mechanism of the delay in the fibroblastic response, Anderson, Weisel et al[9] have shown that variable degrees of suppression or inhibition of the cellular enzyme systems constitute one of the complex physiologic actions of the C_{11}-oxygenated adrenocortical steroids. They suggest that cortisone and ACTH inhibit the hyaluronidase enzyme system through the deprivation of sulfhydryl. Layton[10] substantiated this work in showing that cortisone inhibited the fixation of sulfate used in the synthesis of connective tissue substance.

The clinical role of this activity and the range of applicability have not been established. Rosenberg, Kunderman et al[11] have been able to alter the formation of experimental lye strictures in the esophagus of the rabbit. The encouraging results of their work provided the basis for assaying the fibrosis inhibiting action of cortisone when applied to one of the more vexing problems in urology, that of strictures of the urethra.

Acquired strictures of the male urethra represent a disease process that has been virtually impossible to cure and, at best, difficult to treat. Ninety per cent of the acquired strictures have been of gonorrheal origin, the remaining 10 per cent being traumatic.[12] With the improved methods of treatment of gonorrheal infection this causative ratio is certain to change. In addition, the increasing application of the transurethral route to pro-

From the Department of Urology, St. Louis University School of Medicine, St. Louis.

static surgery could ultimately produce an increase in the number of traumatic strictures.

The pathology of stricture of the urethra lends itself well to any substance which will inhibit fibrous tissue proliferation. The pathologic process is one of an inflammatory reaction with subsequent cicatrization and encroachment on the urethral lumen. The initial periurethritis with subsequent stasis of the inflammatory exudate results in an organization of the exudate into fibrous tissue. Narrowing of the urethra occurs over a period of years in the gonorrheal stricture, and in a matter of weeks in strictures of traumatic origin.

Microscopically there is little difference in the two types of strictures. The strictured area of the urethra is composed of a rather dense fibrous tissue involving the outer coats of the urethra, the corpus spongiosum and Buck's fascia. An area of stricture cut in cross section will show the mucosa to be intact; the remainder of the urethra and the corpus spongiosum is replaced with dense fibrous tissue with the fibers running in a circular direction. The outer layer of fibrous tissue (Buck's fascia) is usually incorporated in the mass and is frequently less dense. Scattered throughout the fibrous tissue are areas of acute and chronic inflammation and necrosis. Serial sections will show the fibrous tissue to decrease at each end of the stricture with the fibers extending into normal corpus spongiosum on each side of the lesion.[13]

The ability of strictures of the urethra to regain their original identity following treatment is a feature well known to anyone who has attempted their treatment. The persistent or recurrent fibrous tissue reaction found in urethral strictures may be due to one of several factors. Probably the best theory is one expressed by Jones[14] who feels that a residual low grade gonorrheal infection persists in the urethra following the initial infection. This apparently localizes at the site of the stricture and aids in the continuation of the recurrent fibrous tissue reaction. Secondary infection with organisms other than neisseria in the periurethral tissues at the site of the stricture is another reasonable explanation. With the present day range of antibiotic therapy, urethral and urinary cultures of known bacterial organisms form an important part in the treatment of the inflammatory strictures of the urethra.

CLINICAL MATERIAL

Thirty-one patients from the urologic services of the St. Louis University Hospital and the St. Louis County Hospital were selected to begin this study. All of the patients had been followed in the outpatient department where they had undergone conventional treament for urethral stricture for varying periods prior to their selection for participation in this study. Twenty-six of the cases were known to have had gonorrhea at some time in the past. Eighteen of the patients gave a history of repeated infections and eleven had received penicillin at the time of their original infection. The adequacy of the penicillin therapy was poorly established in most of the cases that had received it. Aside from the cases of known gonorrheal origin, there is one case included in the inflammatory series in which a primary syphilitic lesion or its local treatment had resulted in a scarred and contracted urinary meatus. In the group of patients with traumatic urethral strictures, four were known to have developed their stricture following transurethral prostatectomy. The fourth traumatic case followed a straddle injury with rupture of the membranous urethra.

The location of the stricture followed previously reported patterns. In the inflammatory group twenty-two were of the membranous urethra, four were of the anterior urethra and one was meatal. All of this group had single strictures. In the traumatic group of four cases, three were single; two of the prostatic urethra, and one of the membranous urethra. The fourth case showed two strictures, one at the meatus and a second in the prostatic urethra.

All of the thirty-one patients were having some symptoms referable to their stricture at the time of the institution of the therapy. The average duration of symptoms from urethral stricture in the entire group was seven years. The cases were selected only on the basis of average general health. One poorly controlled diabetic patient was excluded from the series. The average age of the two groups was 58 years, this being a somewhat false average due to the inclusion of the three much older prostatic patients.

CLINICAL METHOD

Cystourethrograms were done on all patients prior to the institution of therapy, and only those cases with strictures demonstrable by this method were studied further. The patients were then hospitalized and the routine laboratory examinations, including a urethral culture, were made. All of the patients were given daily injections of 400,000 units of procaine penicillin on the day of admission and for the next two days of hospitalization. On the day following admission the patients were taken to the operating room and anesthetized with spinal or intravenous barbiturate anesthesia. The stricture was calibrated and the urethra was dilated with suitable instruments (filiforms and followers) until an F-20 Kollman dilator (male curve) could be inserted. This instrument was placed so that the stricture could be expanded to F-30. The dilator was then removed and an F-24 Foley type catheter was inserted and retained. The catheter was allowed to remain in situ for a period of three days, and the patients were permitted out of bed as soon as they recovered from their anesthetic.

Cortisone therapy (Cortone*) was instituted

* Cortone was generously supplied by the Medical Division of Merck and Company, Inc., Rahway, N. J.

on the first day of hospital admission with an initial dose of 300 mg. being given in the first twenty-four hours. The dose was then reduced to 100 mg. daily in four divided doses for the next thirty days.

Following the removal of the catheter on the third day, the patients were discharged to the outpatient department where they were seen at weekly intervals. All of the patients were given small doses of a soluble sulfa compound during the time that they were taking the cortisone in the hope of eliminating secondary infection at the site of the stricture disruption.

Twenty-one of the patients served as their own controls in the series, as they had undergone this same routine without the cortisone at some time in a twenty-four month period prior to the institution of the present investigation. Twelve of the twenty-six patients with inflammatory strictures had returned with a recurrence of their symptoms within four months of the original treatment. All of the patients showed urethrographic evidence of stricture at the time of the institution of cortisone therapy.

RESULTS

The overall results of this study are represented in figure 1. This represents the condition of the patient nine months following the original dilatation and start of cortisone therapy. The presence of stricture in the nine months urethrogram was considered a failure although the symtomatic response remained satisfactory in several of the cases at the time the urethrogram showed stricture reformation. The evaluation of these patients after only nine months may seem to be premature, but it was felt that the encouraging results will allow offering this treatment to a larger group of patients. In the entire group there were no significant side reactions to the administration of the cortisone. The blood chemistry and the eosinophil count were repeated weekly and at the end of treatment and were found to be unaltered in every cas.

Table 1. *Results of Dilatation and Cortisone Therapy* in Strictures of the Urethra*

	Inflammatory	Traumatic
Total Cases	26	5
Good symptomatic response	20	3
Poor symptomatic response	5	2
Urethrographic improvement	15	2
Urethrographic failure	5	3

* Nine months following the institution of therapy.

For purposes of illustration, several cases will be considered in detail.

CASE REPORTS

Case 1. S. M. I., a 31 year old Negro male, gave a history of having had a primary syphilitic lesion situated over the lower portion of his urinary meatus two years prior to coming to the outpatient department. He had been treated for syphilis by an agency of the United States Public Health Service and his admission serology was reported as negative. The primary lesion was said to have disappeared in six days without residual. Three months later the patient noticed a "hard scar" at the site of the original primary lesion. At that time he was complaining of narrowing of the urinary stream and dysuria. At the time of the initial examination the meatus was noticed to be pinpoint and there was a nonspecific urethral discharge. The urethra was calibrated to F-18 without other evidence of obstruction.

Fig. 1. Case 1. Before treatment with Cortisone. The pinpoint meatus can scarcely be distinguished in this photograph.

The patient was not seen again for three months, when he presented himself for treatment of a periurethral abscess, and again the urinary meatus was found to be pinpoint in size. The patient was hospitalized and the abscess drained. There was no communication with the urethra that could be demonstrated. At the time of the incision and drainage the meatus was incised to admit an F-24 catheter. The catheter was retained for three days and the patient was given one million units of penicillin in divided doses.

Fig. 2. Case 1. Nine months following dilatation and Cortisone treatment. The meatus readily admits an F-24 steel sound.

The patient again returned in four months with a pinpoint meatus and difficulty in passing urine. He

was hospitalized and the meatus incised to admit an F-30 sound. He was given the cortisone routine and discharged. Examination in the outpatient department nine months following treatment found him symptom free and with the meatus readily admitting a F-24 sound.

This case was of particular interest in that it allowed a visual estimation of the results not obtained in strictures of the deep urethra. Tissue biopsy of the

Fig. 3. Case 2. Prior to the institution of treatment.

lesion would have been of considerable interest but was avoided for fear of further damaging the functional activity of the urinary meatus.

Case 2. SLCH, a 63 year old Negro male, was known to have had a urethral stricture of fifteen years duration. He admitted having had repeated gonorrheal infection in his youth, both with and without treatment. He had been dilated previously in the outpatient department at intervals varying from one

Fig. 4. Case 2. Nine months following Cortisone treatment.

to eight months. There was a history of the surgical drainage of a periurethral abscess eighteen months prior to the institution of this study. Three months following this treatment he was again hospitalized and the stricture was dilated under anesthesia to F-28. He was given penicillin and a urethral catheter was retained for three days following dilatation.

At the time of the present admission he complained of increasing dysuria, narrowing of the urinary stream and a periodic urethral discharge. A cystourethrogram revealed a filliform stricture of the membranous urethra with an area of periurethral extravasation of dye at the site of the previous urethral abscess. The urethra calibrated F-7 in the area of stricture. The patient was given a second dilatation supplemented with the cortisone routine.

Seven months later the patient returned to the medical department for treatment of an acute episode of gouty arthritis. He gave no symptoms referable to his stricture at that time, and his urethrogram showed no evidence of stricture, although the previous irregularity persisted.

Case 3. SLCH, a 69 year old Negro male, had undergone a transurethral electroresection of his prostate eighteen months prior to starting this study. One month following his prostatectomy he was seen in the clinic complaining of terminal burning and narrowing of the urinary stream. Examination disclosed a meatal urethral stricture that calibrated F-6. Further calibration of the urethra revealed a second area of narrowing in the region of the prostatic urethra. It was felt at first that this was remaining prostate. although more than 100 grams of tissue had been removed at the original resection. A simple meatotomy was done at the time of examination and the meatus calibrated

Fig. 5. Case 3. Prior to Cortisone therapy. The defect in the urethra following prostatectomy is noted.

to F-28; the posterior urethra was dilated to F-28 and he was discharged.

This patient was followed at intervals varying from one to three months, each time showing further narrowing of the meatus. He was repeatedly dilated and a meatotomy was performed on two occasions. The patient was hospitalized for the cortisone regimen and a urethrogram revealed a second stricture in the prostatic urethra. Under anesthesia the meatus was incised widely and the prostatic urethra was dilated to F-30. A catheter was retained and the cortisone routine was carried out.

Nine months later the patient was asymptomatic with the urethrogram within normal limits and the meatus admitting an F-22 steel sound without difficulty.

SUMMARY

An attempt has been made to augment the dilatation of urethral strictures with the utilization of cortisone to delay the fibroblastic response. Thirty-one cases of proven urethral stricture of three causes have been submitted to a routine of extreme dilatation supplemented by cortisone and penicillin. Nine months after the initiation of treatment seventeen of the cases show encouragingly good results. This report represents a preliminary

observation and no effort is made to draw conclusions from this early phase of the work. The cases of failure in the original series are being included in a second group of cases which will be given somewhat larger doses of cortisone over a longer period of time. The cases of favorable

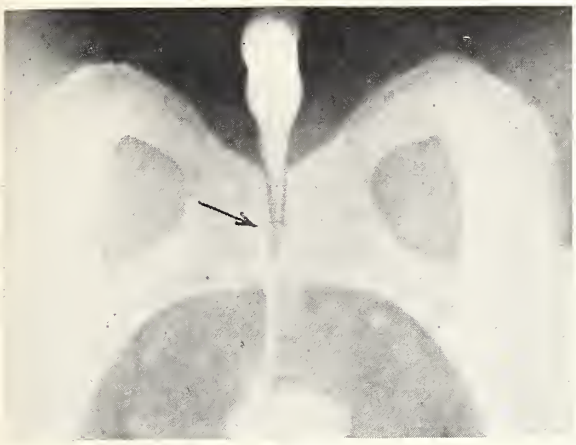


Fig. 6. Case 3. Nine months following dilatation and cortisone therapy. The defect noted in this urethrogram cannot be demonstrated with an olivary bougie.

response are being followed and will be evaluated at the end of twelve and eighteen months. The local application of cortisone at the site of the disrupted stricture theoretically would offer an opportunity for further study of this problem.

4936 Nottingham.

BIBLIOGRAPHY

1. Mason, H. L.; Meyers, C. S., and Kendall, E. C.: The Chemistry of Crystalline Substances Isolated from the Suprarenal Gland, J. Biol. Chem. **114**:613-631, 1936.
2. Hench, P. S.; Kendall, E. C.; Slocum, C. H., and Polley, E. F.: The Effect of a Hormone of the Adrenal Cortex (17-hydroxy-11-dehydrocorticosterone) and Pituitary Adrenocorticotrophic Hormone on Rheumatoid Arthritis, Proc. Staff Meet., Mayo Clin. **24**:181, 1949.
3. Alrich, E. M.; Carter, J. P., and Lehman, E. P.: The Effect of ACTH and Cortisone on Wound Healing, Ann. Surg. **133**:783-789, 1950.
4. Plotz, C. M.; Howes, E. L.; Blount, J. W.; Meyer, K., and Ragan, C.: Action of Cortisone on Mesenchymal Tissue, Arch. Dermat. & Syph. **61**: 919, 1950.
5. Howes, E. L.; Plotz, C. M.; Blount, J. W., and Ragan, C.: Retardation of Wound Healing by Cortisone, Surgery **28**:177, 1950.
6. Creditor, M. C.; Bevans, M.; Mundy, W. L., and Ragan, C.: The Effect of ACTH on Wound Healing in Humans, Proc. Soc. Exper. Biol. & Med. **74**:245, 1950.
7. Baker, B. L., and Whitaker, W. L.: Interference with Wound Healing by the Local Action of the Adrenocortical Steroids, Endocrinol. **26**:544-551, 1950.
8. Blount, J. W.; Plotz, C. M.; Lattes, F., Howes, E. L.; Meyer, K., and Ragan, E.: The Effect of Cortisone on Experimental Fractures in the Rabbit, Proc. Soc. Exper. Biol. & Med. **73**:678-681, 1950.
9. Anderson, G. E.; Wiesel, L. L.; Hillman, R. W., and Stumpe, W. M.: Sulfhydryl Inhibition as a Mechanism in the Effects of ACTH and Cortisone, Proc. Soc. Exper. Biol. & Med. **76**:825-827 (April) 1951.
10. Layton, L. L.: Effect of Cortisone upon Chondroitin Sulfate Synthesis by Animal Tissues, Proc. Soc. Exper. Biol. & Med. **76**:596-598 (March) 1951.
11. Rosenberg, N.; Kunderman, P. J.; Vroman, L., and Moolten, S. E.: Prevention of Experimental Lye Strictures of the Esophagus by Cortisone, Arch. Surg. **63**:1-5 (August) 1951.
12. Rolnick, H. L.: The Practice of Urology, Philadelphia, J. B. Lippincott Co., 1949, vol. 1, pp. 253-261.
13. Beard, D. E., and Goodyear, H. L.: The Pathology of Urethral Strictures, J. Urol. **59**:619-626, 1948.
14. Jones, R. F.: Personal communication, Feb. 20, 1952.

THE CULPABILITY OF THE HOMOSEXUAL

NATHAN J. BLACKMAN, M.D.
ST. LOUIS

HOMOSEXUALITY has been punishable since biblical times. Yet its prohibition alone has presented no cure, nor have repressions given a solution to this vexing, hostility provoking and, according to Kinsey, all too prevalent sexual abnormality. Periodically, under the sway of mass hysteria, harsh, repressive legislation is resorted to with the intention of curbing or stamping out sexual deviation. Knowledge about homosexual individuals has been gained only recently. Adequate means of coping with, curbing or curing homosexuality have been so limited that legislation alone has not accomplished its purpose.

It has been commonly accepted that homosexuality has its roots in the early relationships between the child and its parents. Freudian postulates about psychosexual development, the Oedipus constellation and regression to infantile forms of sexuality have thrown new light on sexual aberrations. Thompson[1] describes homosexuality as but a symptom of a more general personality difficulty. Overt homosexuality is not necessarily due to a weak superego. Many homosexual persons have intense guilt feelings, are unhappy and feel handicapped. In some cases it may be due to a fear of the opposite sex, inability to accept responsibility, an attempt to cope with hatred of one's own sex, a flight from reality, a symptom of destructiveness or a reaction to the parental disappointment about one's sex. To relate homosexually becomes less frightening and has none of the terrible unpredictability of the unknown that heterosexuality represents to an individual who fears his loneliness but is unable to accept sustained intimacies. For some individuals homosexuality is the only way of coping with the problems of loneliness and isolation, and as such it becomes a better solution to their inability of otherwise relating at all. Blackman[2] describes the homosexual as being reared with a feeling tone of isolatedness from a meaningful parent. The homosexual resorts to love play situations which contain elements of the same loneliness he subtly recalls from his past. Homosexuality becomes compulsively mandatory for the reason that it is a transient, unreal and a socially ostracized relationship. Karpman[3] attributes homosexuality as due to early environmental influences which have fixed the psychosexual growth at a particular developmental level. He stresses the presence of a positive emotional tone and guilt feelings. The homosexual resorts to antisocial offenses only when undue obstacles are encountered in his efforts to relieve tension and anxiety. His craving is due to a strongly charged impulsive,

Presented at the annual meeting of the American Academy of Forensic Sciences, Atlanta, Ga., March 7, 1952.
From Malcolm Bliss Psychopathic Hospital, St. Louis.

instinctive life which cannot be modified by punishment.

Gutheil[4] describes a compulsive drive to reproduce specific psychodramatic childhood scenes and attitudes. Two homosexuals may reproduce a heterosexual scene in which one plays the role of a friendly mother instead of visualizing the woman he is afraid of. A homosexual may shy away from women because of suppressed incestuous drives. There is a repetition of frightening infantile experiences to which, in the homosexual act, there is a happy ending. Glover[5] mentions the inferiority feelings, the presence of a schizoid element in the personality structure, an extreme narcissistic selfishness and disregard for people as well as compulsiveness toward inertia. Tappan[6] points out that legislation to curb homosexuality is inadequate as long as treatment facilities are not actually available. He enumerates various premises under which legislation about sexual offenders is undertaken, and the failure to legislate about a condition so difficult to define. He defines those requiring compulsory segregation as "those who are a clear and present danger to person and property in the community as evidenced by their habitual aggression, their failure to employ ordinary self control, and their lack of compunction or remorse for their behavior." Sutherland[7] describes the anomaly of laws being passed in periods of panic and then discarded or not used because: (1) either prosecutor or judge wish to invoke a penalty rather than hospitalize the homosexual, or (2) the lawyer advises the offender not to talk to the psychiatrist, thus making it impossible to arrive at a diagnosis. He also stresses the lack of precision in the concept of the sexual psychopath and mentions the public misconception that sex crimes are necessarily perpetrated by "degenerate sex fiends." He also mentions that 4,000 homosexual persons discharged from military service exceeded the average in intelligence and education and were generally law abiding and hard working. Bensing[8] reviews the "crazy quilt" laws produced by state legislatures and gives as examples Louisiana where mandatory death is provided for rape, and New Jersey where the same charge can be settled for a moderate fee. He concludes his extensive survey by the comment that much of the sex law is not based on reality and that it is bewildering and incomprehensible.

STATISTICAL DATA

Table 1. *Fifty Homosexual Patients at Malcolm Bliss Psychopathic Hospital (City Hospital, Saint Louis, Missouri).*

Diagnostic Classification	*Number of Cases*	*Incidence of Offenses*	*Number of Cases*
Psychotic	11	Molestation	11
Psychoneurotic	8	Suicidal Attempt	10
Psychopathic personality	8	Sodomy	8
Chronic alcoholic	8	Burglary or Larceny	7
Mental defective	4	Exhibitionism	6
Homosexual (without other demonstrable psychopathology)	11	Robbery (1st degree)	2
		Forgery	2
		Carrying concealed weapon	1
		Writing obscene letter	1

It is quite apparent from this table how diverse the psychopathology of the homosexual person is. (Ellis[9] describes the incidence of diagnosis among sex offenders referred to the New Jersey State Diagnostic Center as: normal or mildly neurotic, about 40 per cent; severely neurotic, 35 per cent; psychotic, psychopathic, mental defective, 25 per cent.) Among the psychopathic patients are some with a repetitive, long standing antisocial behavior, emotional instability, impulsivity and repeated manifestations of immature judgment. The majority of offenses against property or person (other than sexual) were in this group. The high incidence of psychotic individuals might be due to the fact that only the more obviously maladjusted prisoner is referred to the hospital for observation. Among the ten suicidal attempts was one of a youth who, in the midst of a homosexual panic, threatened to jump from a bridge. Neurotic and "normal" persons led in number of suicidal attempts. About half of the offenses stemmed directly from homosexuality while at least another ten, such as suicidal attempts, were often due to homosexual panic states.

DISCUSSION

The understanding of homosexuality has made considerable progress since the earlier concepts of Freud that overt homosexuality is due either to an inverted Oedipus situation or to a regression to narcissism. Even the absence of a strong superego has been put in doubt by the evidence of anxiety and strong guilt feelings in homosexual persons. One comes to see homosexuality as a symptom, a part of the personality disorder in which loneliness, fear, inferiority attitudes, the nonacceptance of reality and unwillingness to assume adult roles of responsibility play an ever more important role. The homosexual person needs to relive, in the attenuated and present, some of the loneliness he senses from his lurking past. He seeks a partner with whom he can relive anxieties within the intimacy of friendship and is often attracted by the very inconstancy toward which the relationship is foredoomed. The homosexual person taunts society through his resort to a sexual behavior which is futile, barren, incapable of fruition and socially nonacceptable. Homosexuality is frequently a repetition, on the adult level, and with sexuality as a mode of expression, of the motivation that caused the juvenile delinquent to become antisocial.[9] Namely, it is a challenge, a taunt, an impingement on the mores of society as a means of requiting some of the inquietude that an unsatisfactory child-parent relationship has left in its wake. This explains in the statistical data the predominance of antisocial aggressiveness as shown by the psychopathic persons.

One becomes aware that the homosexual individual faces a problem of accepting reality, in terms of credence or trust, as well as accedance or relating to the adult world. Homosexuality begins to be understood as part of a reaction pattern, as a symptom of a personality distraught, in need of a retort or challenge, expressing a hurt or a need to deny the social environment that has created havoc and doubt during this person's formative period. To question why a given person is homosexual is as pertinent as to question why he steals a car. What causes him to act out hostility toward society? Why does he persevere in immature, desultory and superficial emotional reactions? What interferes with his ability to become intimate, involved, responsive and adult in his role as man? What interferes with his native endowment for creativeness, for assertion, for leaving his mark and tracing his presence upon the destiny of his existence?

Some understanding of these questions may be derived from an honest appraisal of present day attitudes toward existence. Life has more and more become a race for acquisitiveness, and sincerity—a willing price in its attainment. Emotions are stifled, feelings are unexpressed, rights are trampled and frankness is avoided—all part of a price for shunning one's own insecurity while reaching for the superficial but less meaningful in life.

It is being raised within this atmosphere of immature living that breeds loss of respect and distrust, that veers the adolescent from the path of acceptance of maturity into the byways of existence, that causes the compulsive search for acceptance, the need of being wanted, expressed not in socially constructive terms but in the frequently destructive, or at least, nonrewarding, transient, elusive homosexual relationships. The search for a partner, for someone to be wanted by, to be needed —the search has become an obsessive must, a compulsive substitute for the abject absence of acceptance during one's childhood.

It is with this newer grasp of what the homosexual represents that the futility of repressive legislation becomes apparent. One cannot eradicate without understanding both the causes and necessity of being homosexual, nor without bringing some tangible succor to the anxiety and guilt ridden homosexual individual. Merely punishment or forceful segregation often accentuates the feeling of being rejected by society. This intensifies hostility toward society (often a pseudonym for early paternal authority), the hostility that was not adequately dealt with during childhood. And this brings the oft repeated vicious cycle; namely, that the ones on whom society spends the most to correct, rehabilitate, reeducate to functional living are also the ones most likely to become recidivists, as if punishment calls for a reprisal just like discipline by the parents called for a temper tantrum. In neither case does the tolerance, objectivity or respect for the person exist. It is rather as if challenged authority responds, almost reflex like, by smacking down, punishing, stamping out the challenger. Thus, the child-parent bouts become the adult versus society rounds in later years.

The culpability of the homosexual is further complicated by the extremes in legislation in various states. It is certainly a problem that cannot be left to law enforcement agencies alone but has to remain a problem and a consequence, a taunt and a challenge, a lien on one's conscience and a need for understanding on how to cope, remedy, forestall and prevent, and not merely curb or punish the homosexual person for a mode of sexual behavior which he has not chosen, but which has become imposed upon him by attitudes, circumstances and events of which he was the helpless pawn, rather than the scheming satyr.

SUMMARY

Homosexuality is a symptom, a part of a need within a person to challenge, taunt, deny his relatedness and obligation to mature responsiveness. As a symptom of a personality in throes of disequilibrium, it may be found in individuals suffering from different psychopathology. To discern "culpability" without understanding what the symptom of homosexuality stands for has led to bursts of legislating, often difficult and impractical in application.

The study of fifty homosexuals referred for mental observation does not single out any preponderance of offenses in any one psychiatric group, except for the greater number of criminal offenses (other than sexual) among psychopathic and more suicidal attempts among neurotic or "normal" homosexual individuals.

Homosexual persons need treatment, understanding, humane and adult handling, not merely punitive, repressive measures. They are not necessarily the most threatening menace, but represent rather a cross section of people with various personality defects, not free of guilt, nor engrossed in hedonistic exploits. Instead they are often anxiety ridden, full of inferiorities and hurts, showing a masochistic need to create hostility so as to salve some of the self-punitive attitudes within them.

4500 Olive St.

BIBLIOGRAPHY

1. Thompson, Clara: Changing Concepts of Homosexuality, Psychiatry **20**:183, 1947.
2. Blackman, Nathan: The Genesis of Homosexuality, J. Missouri M. A. **47**:814 (November) 1950.
3. Karpman, Benj.: The Sexual Psycopath, Am. J. Psychotherap. **5**:584, 1951.
4. Gutheil, E. S.: Am. J. Psychotherap. **5**:593, 1951.
5. Glover, B. H.: Observations on Homosexuality Among University Students, J. Nerv. & Ment. Dis. **113**:377, 1951.
6. Tappan, Paul W.: J. Social Hyg. **35**:354, 1949.
7. Sutherland, E. H.: The Sexual Psychopath, J. Crim. Law & Criminol. **40**:543, 1950.
8. Bensing, Robert C.: A Comparative Study of American Sex Statutes, J. Crim. Law & Criminol. **42**:57, 1951.
9. Ellis, A.: Am. J. Psychotherap. **5**:591, 1951.
10. Blackman, Nathan: Medical Responsibility for Juvenile Delinquency, Postgrad. Med. **10**:499, 1951.

INCREASED INCIDENCE AND DEATH RATE IN DIPHTHERIA AND PERTUSSIS

THOMAS L. DWYER, M.D.
MEXICO

DIPHTHERIA today shows evidence of increased incidence with a shift to the older age groups on a higher mortality and complication rate. On the other hand, pertussis shows an inclination to increased incidence and severity with a high fatality to the less than 1 year of age group.

It has been more or less the concept that diphtheria is a disease of younger children. However, many cities of the United States where communicable disease records are available show the disease increasing in persons more than 40 years of age and a decline of reported cases in the youngest age group comprising children from birth to 14 years. As early as 1947, it was said that about one half the cases of diphtheria occur in children less than 5 years of age.

Geiger, in 1945, stressed the shift in the disease. An investigation covering a nine year period, from 1942 to 1950, in the isolation division of the San Francisco Hospital showed a total of 273 patients hospitalized, of which 65 per cent were males and 35 per cent females. There was insignificant variation in this ratio when computed year by year. The mortality rate for males during the nine year period was 20.2 per cent and for females 17.8 per cent. In the total group of 273 cases, there were only eight Negroes and three orientals, distributed at random over the nine year period.

Quoting from a report of A. Erin Merkel on the outbreak of diphtheria in Medford, Oregon, in 1949, he states that an active immunization program had been in force in the county since 1925 and more than 90 per cent of the school and preschool children had been vaccinated against smallpox and inoculated against diphtheria. Their procedure had been a triple vaccine shot (diphtheria-pertussis-tetanus) 0.5 ml. at each dose at monthly intervals. With the second injection, vaccination against smallpox is also given so that the scar may be observed at the time of the last injection. Eighteen months following this last injection one booster injection is given.

During the preschool examination of children, or in the first grade, another stimulating dose of the same material, or 1 ml. of fluid diphtheria toxoid, is given. Thereafter, 1 ml. of fluid toxoid is given every three or four years until the children are about 15 years of age.

Even though diphtheria toxoid has demonstrated a valuable degreee of protection there have been reported notable instances of apparent failures, even in groups with high percentages of inoculated or Schick negative persons. When the infected strain is especially virulent the fatality rate reported from various outbreaks has been especially high and most of the deaths were due to myocardial failure.

Walton M. Edwards, Lieutenant Colonel, U.S.A., states that diphtheria was a major problem among military personnel in World War II, as a result of the introduction of large numbers of troops into the European Theater where the endemic rate was high. The incidence among troops outside the United States was about six times that among troops within the United States in 1944 and 1945. He analyzed one hundred selected fatal cases occurring in United States Army hospitals from 1943 to 1947. Diphtheria antitoxin was administered to eighty-three patients in this group. The elapsed time between the onset of symptoms and administration of the antitoxin varied from one to thirty days (average 6.5). The amount of antitoxin administered varied from 20,000 to 400,000 units (average 83,000). Because the effectiveness of antitoxin depends on the administration of adequate amounts early in the disease, giving it 6.5 days after the onset of symptoms would appear to be too great a delay. The history of previous Schick test was elicited in only one patient. The clinical records in this series revealed no evidence that a Schick test was performed in the current admission. The symptoms were variable and simulated an upper respiratory infection. One half the patients had temperature elevations above 102 F. Of the cranial nerves the ninth and tenth were most frequently involved. The presence of membrane on the pharynx was observed in 85 per cent of the patients but no physical characteristic of this finding was pathognomonic of diphtheria. The initial throat culture was positive for diphtheria in 60 per cent and concomitant throat smears in 50 per cent of the patients. Albuminuria occurred in 63 per cent. Abnormal electrocardiograms were noted in 90 per cent from whom records were obtained. Delayed recognition of the disease with resulting delays in specific treatment and use of antitoxin produced the complications which resulted in death.

The shift in incidence to the older age groups, especially in adults more than 40 years of age may possibly be explained in the widespread immunization programs; the younger persons are protected while the older persons are not. Most adults have not been artificially immunized, and it is probable that development of natural immunity has decreased in recent years because of less exposure to the organism. The higher mortality rate from the disease in older persons puts further stress on the importance of the relative increase in incidence in the higher age groups.

Diphtheria antitoxin is the single important agent in the treatment of this disease. Because of the necessity for immediate neutralization of circulating toxin, the intravenous route appears to be the one of choice in most instances. Exact dosage requirements cannot be stated. They vary between 20,000 and 100,000 units, depending on

the site, the extent and duration of infection. The entire amount should be given at one time. Underdosage and repeated small doses are to be condemned. Serious serum reactions are rare, but is an annoying problem.

The customary procedure at present is to start active immunization in infancy and early childhood after which little is done to maintain immunity. By this method, in recent studies, it is learned that a great proportion of the adult population lacks humoral immunity and is hence more susceptible to diphtheria under certain conditions than are their newborn infants. Adults are exposed possibly to a greater extent than formerly because of more world traveling, migration, greater exposure to the carrier of the disease. Investigators indicate that childhood immunization has little effect on the immunity of an adult population. Active immunization is largely lost within a few years unless booster injections are given. Increased fatality rate in the older age group would suggest serious consideration toward periodic recall booster injections. Extreme vigilance should be observed in maintaining an adequate immunization program. Bacteriologic studies should be made to discover new types and to develop from these new types a more effective vaccine and serum.

The increased interest in preventive medicine in recent years has brought about a definite drop in mortality rates for the so-called common infectious and communicable diseases of childhood. The medical profession has been especially active in promoting pertussis immunization but the present evaluation is a shift of pertussis with high mortality rate to the infant from birth to 6 months. One investigator stated that the mortality rates between early infancy and later childhood are most strikingly illustrated by the fact that while children in the first year of life account for only 7.85 per cent of the total number of cases reported, they provided 72.4 per cent of the deaths (seventy-one of ninety-eight). Some areas record deaths from whooping cough by age in months. The age group most vulnerable to this disease is not protected by present prophylactic measures, and the question arises of how present immunization schedules may be altered in order to bring about a decrease in mortality due to whooping cough. "It is extremely important to know in what manner adequate protection can be extended to children in this age group of early infancy, especially to those in the first 6 months of life. This group can hardly be protected by immunizations which do not begin until the sixth month and the problem crystallizes into the question of how early the immunization procedure can begin to call out an active immunity and offer some valuable degree of clinical protection."

While the antigen tissue clash may be severe and, at times, overwhelming, most infants manifest sufficient function of the reticulo-endothelial system to survive. "This would then indicate that successful immunizations could be done at an early age."

It is generally conceded that an immunization response is more readily obtained after 6 months of age than during the first few weeks of life, but at the same time they point out that the percentage response and the degree of response, even in the very young infant, are at times life saving. They know that those children under 6 months of age who contract whooping cough after being immunized tend to have only a mild form of the disease. "Whether initial efforts at immunization begin at 3 months of age, at 1 week or in a pregnant mother should depend, not on a wide national policy, but on local immunization schedules especially fitted to suit individual circumstances. In children whose home environment is such that they can be sheltered from the common infections, the physician may well wait with the immunization program until the sixth month, when a high degree of success may be expected. When probable exposure can be anticipated, however, as it can in crowded districts and where high rates of incidence of whooping cough prevail, then to wait until the sixth month to give infants protection is often to have waited too long. In such situations early immunizations is imperative." Subsequent booster doses would then serve to prolong and reenforce the immunity obtained.

SUMMARY

1. Early immunization for pertussis, where indicated, from 3 months of age or less, should be carried out.

2. Diphtheria immunization at 6 months should be accompanied with tetanus anitoxin.

3. Booster shots of diphtheria-pertussis-tetanus, one shot every two years until the first grade, then at five year intervals, should be done.

4. Schick test should be done routinely before each subsequent immunization after the initial shot.

5. Early diagnosis is essential to reduction of mortality rate.

6. Diphtheria anitoxin in adequate doses, preferably intravenously, should be given immediately following diagnosis of diphtheria.

119 E. Love St.

BIBLIOGRAPHY

1. Kohn, J. L.; Fischer, A. E., and Marks, H. H.: Case Fatality in Infants and Children with Pertussis, 1942-1946, Pediat. 5:840 (May) 1950.
2. Fox, M. J., and Snartemo, R.: Prophylaxis of Whooping Cough, Am. J. Dis. Child. 78:677 (November) 1949.
3. Gordon, J. E., and Hood, R. I.: Whooping Cough and Its Epidemiological Anomalies, Am. J. M. Sc. 222:333 (September) 1951.
4. Hoyne, A. L., and Brown, R. H.: Pertussis in Infancy, Arch. Pediat. 67:213 (May) 1950.
5. Merkel, A. E.: An Outbreak of Diphtheria in Medford, Oregon, 1949, Am. J. Pub. Health 41:522 (May) 1951.
6. Edwards, W. M.: Analysis of Fatal Cases of Diptheria, U. S. Armed Forces M. J. 2:217 (February) 1951.
7. Geoger, J. C.: Changing Trends in Diphtheria in San Francisco, Arch. Pediat. 62:510 (November) 1945.
8. Brainerd, H., and Bruyn, H. B.: Diphtheria: The Present Day Problem, California Med. 75:290 (October) 1951.
9. Cohen, P.; Schneck, H.; Dubow, E., and Cohlan, S. Q.: The Changed Status of Diphtheria Immunity, Pediat. 3:630 (May) 1949.

DIGILANID AS COMPARED TO THE POWDERED LEAF OF DIGITALIS IN CONGESTIVE CARDIAC FAILURE

JOSEPH B. WOLFFE, M.D.
AND
ANTHONY D. DALE, M.D.
PHILADELPHIA, PA.

A SEARCH FOR digitalis glycosides which will equal or surpass the therapeutic efficacy of the powdered whole leaf has been carried out for decades.[1, 2, 3] The isolated glycosides have found favor over the whole digitalis leaf clinically because of constant potency, speed of action, greater absorption and lesser gastrointestinal irritations. Every glycoside or any combination of them have their advocates.[1, 2, 3, 4] In the last quarter century physicians have reported the use of various preparations of digitalis and the isolated glycosides available in this country. While each one has a particular merit, none of them equalled the therapeutic efficacy of the powdered leaf of digitalis. The reason, as discussed by Stoll,[5] may be that these individual glycosides are degeneration products of the initial cardiac glycosides as they exist in the fresh plant. We, therefore, returned to the use of the powdered leaf because it seemed to us to yield the best results in the majority of cases. It is quite possible that the glycosides as found in the digitalis leaf in their natural proportions may be responsible for the good therapeutic effect.

Table 1.

Number of Cases	Diagnosis
3	Rheumatic heart disease arrested, mitral insufficiency and mitral stenosis, normal cardiac rhythm.
5	Rheumatic heart disease arrested, mitral insufficiency and mitral stenosis, auricular fibrillation.
2	Rheumatic heart disease arrested, mitral insufficiency, mitral stenosis, aortic insufficiency, auricular fibrillation.
4	Essential hypertension with cardiac hypertrophy and congestive cardiac failure.
5	Atherosclerotic hypertensive cardiovascular disease with coronary insufficiency.
1	Luetic heart disease with aortic insufficiency and congestive cardiac failure.

Our experience corroborates Gold's impression[6] that various samples of digitalis leaf differ from one another in potency because of difficulties in standardization.

Stoll[5] and coworkers, by using a special process for extraction of the glycosides from Digitalis lanata, succeeded in isolating a group of glycosides in the form in which they exist in the fresh plant. He called this glycosidic compound Digilanid which is composed of lanatosides A, B and C in constant proportions. A study of the therapeutic efficacy and tolerance of Digilanid as compared to the powdered leaf of digitalis was undertaken.

Twenty patients were selected who were on a maintenance dose of digitalis leaf ranging from months to years. These particular patients experienced recurrent bouts of cardiac decompensation, toxic symptoms necessitating frequent changes in dosage of digitalis leaf and in some instances, patients refused to take digitalis because of gastric irritations. Ages ranged from 13 to 76 years.

Eight of the patients, with evidence of cardiac decompensation, were confined to bed and were given oxygen, diuretics, low sodium acid-ash diet and sedatives at the time Digilanid was substituted for the digitalis leaf. No changes were made in the management with the exception of Digilanid substitution.

The maintenance dose of Digilanid was found to be one tablet daily (.333 mg.) in fourteen patients and two tablets daily in six patients. After six months of close observation only two patients complained of gastrointestinal irritation. Five patients who previously required mercurial diuretics at frequent intervals did not exhibit any subjective or objective signs of decompensation following Digilanid therapy. This was due to the fact that Digilanid was better tolerated and the maintenance dose was taken regularly in contrast to the digitalis leaf which the patients stopped from time to time. Two of the patients with auricular fibrillation took powdered leaf of digitalis for a number of years and reverted to normal rhythm only after being placed on Digilanid. This was attributed to the regularity of dosage which is made possible by taking a stable glycoside. The other patients with auricular fibrillation showed a decrease in pulse deficit following Digilanid therapy. Six patients continued to experience attacks of decompensation requiring frequent diuretics and occasional hospitalization for stricter supervision.

SUMMARY AND CONCLUSIONS

1. Digilanid was substituted for powdered digitalis in twenty patients in whom untoward reactions necessitated frequent changes in the dosage because of low tolerance to the drug or because of the inconstant potency of powdered digitalis.

2. In this series of patients, the therapeutic effect of Digilanid equalled that of powdered digitalis and in several cases surpassed it.

3. Digilanid has the advantage of constant potency, speed of action, good absorption and minimal gastrointestinal irritation.

Wolffe Clinic.

BIBLIOGRAPHY

1. Gold, H.; Kwit, N. T., and Cattel, McK.: Studies on Purified Digitalis Glucosides. I. Potency and Dosage of Digitaline "Nativelle" by Oral Administration in Man, J. Pharmacol. & Exper. Therap. **69**:177-97 (July) 1940.
2. Kwit, N. T.; Gold, H., and Cattel, McK.: Studies on Purified Digitalis Glucosides. II. Potency and Dosage of Lanatoside C. in Man; J. Pharmacol. & Exper. Therap. **70**: 254-69 (November) 1940.
3. Sieve, B. F.: Digitalis Crude. Drug Preparations Versus Chemically Pure Principles, Med. Ann. District Columbia **11**:47-51 (February) 1942.
4. Schwartz, George: A Clinical Investigation of the Digitoxins, Am. Practitioner **1**:61-67 (January) 1950.
5. Stoll, Arthur: The Genuine Cardiac Glucosides, Am. Pharmacol. A. **27**:761-773 (September) 1938.
6. Gold, Harry: The Choice of a Digitalis Preparation, Connecticut M. J. **9**:193 (March) 1945.

From the Wolffe Clinic in Philadelphia and the Valley Forge Heart Institute and Hospital, Fairview Village, Pa.

Postgraduate Review

RECENT ADVANCES IN THYROID PHYSIOLOGY AND TREATMENT

J. LERMAN, M.D.
BOSTON, MASS.

THE DEVELOPMENT OF knowledge of the thyroid gland forms an important chapter in medical history. Following the discovery by Baumann in 1896 that iodine is a normal constituent of the thyroid, biochemists studied the thyroid hormone intensively, culminating in the isolation of thyroxine by Kendall[1] in 1915, the identification of the structural formula by Harington[2] in 1926 and the synthesis of thyroxine by Harington and Barger[3] in the following year.

In vivo, the synthesis of thyroxine takes place in the matrix of the protein molecule, which is called thyroglobulin. In vitro, any protein containing tyrosine when exposed to elemental iodine will develop thyroid-like physiologic activity, which activity is due to the formation of thyroxine and some of its precursors.

In recent years the introduction of the goitrogenic agents, thiocyanate and thiouracil, and of radio-active iodine, as well as the perfection of technics measuring circulating iodine in the blood, have presented new and important tools for the study of thyroid physiology.

A word about radio-active iodine technics: I^{131} can be used in several ways to measure the function of the thyroid. First, if a tracer amount of radio-active material is administered, the amount of activity remaining in the gland at the end of a given period of time is an index of its secretory activity. A variant of this is measuring the rate of accumulation of radio-active iodine in the thyroid over a period of time. This radio-active uptake measures the functional capacity of the thyriod gland, providing there is a normal intake of iodine in the diet, that the subject is not receiving large doses of ordinary iodine or some type of agent which interferes with the concentration of iodine in the thyroid. Recently, Stanbury et al[4] showed that in an iodine deficient area, the normal radio-active iodine uptake of 30 to 50 per cent does not apply. The uptake of patients in such an area is in the hyperthyroid range of 60 to 90 per cent. On the other hand, the patient receiving iodine in any form in large amounts, or a goitrogenic agent, has little or no uptake of radio-active iodine.

Secondly, the development of directional counting permits the measurement of activity in nodules. This will be discussed later.

Thirdly, thyroid function is measured by radioautographs obtained after the thyroid is removed. This method consists of applying sensitive photographic film to sections of thyroid, the patient having received a fairly large dose of radio-active iodine before operation. By this method, relative activity of different portions of the thyroid can be identified.

Finally, Chaikoff and others[5] use the amount of radio-active iodine incorporated in the protein bound iodine of the blood after it passes through the thyroid gland as a measure of function of the thyroid.

Knowledge of certain aspects of thyroid physiology was gained by use of these various new tools.

IODINE, THYROID, AND THYROTROPIC HORMONE

The thyroid hormone is unique in that it contains iodine in organic combination. Without iodine, the material formed by the thyroid is inert. Thyroid protein, extracted from endemic goiters, contains no organically bound iodine and has no physiologic activity. It is, therefore, not surprising that the thyroid has an excessive affinity for iodine. It traps inorganic iodide which circulates in the blood stream and in the extracellular fluid. A normal thyroid may concentrate iodide up to twenty times the blood concentration, and the hyperplastic thyroid may concentrate up to two hundred and fifty times the blood concentration. The trapping of iodide takes place even when the gland is blocked by a drug which prevents the synthesis of thyroid hormone. The iodide so trapped can be discharged from the gland by an excess of thiocyanate ion. Once the iodide is incorporated into the organically bound hormone, it cannot be so released.

What is the nature of this iodide trapping mechanism? The ease with which thiocyanate releases iodide suggests that its attachment to the thyroid must be labile in nature. At least two possible explanations may be offered. First, the thyroid cell may selectively absorb iodide against a concentration gradient, just as other tissues reabsorb organic and inorganic substances by the expenditure of energy. A second explanation is that iodide is simply absorbed by the protein of the thyroid cell, which possesses a specific affinity for it. This does not require the expenditure of energy. The fact that Wyngaarden et al[6] showed that homogenates of thyroid, free from cellular structure, are able to trap iodide favors the second theory. Since the trapped iodide is precipitable by such agents as trichloracetic acid or zinc hydroxide, it must be attached to the protein molecule. However, by means of chromatography they found that most of the iodide trapped in

---

Associate Physician, Massachusetts General Hospital, Boston; Clinical Associate in Medicine, Harvard Medical School, Boston.

Second Annual Memorial Lecture of the Menorah Hospital, Kansas City, Missouri. Delivered on April 29, 1952.

the homogenates is recovered in the form of inorganic iodide.

After iodide is trapped by the cell, it becomes incorporated as organic iodine in the thyroglobulin molecule, existing in the form of three or more amino acids, namely, monoiodotyrosine, diiodotyrosine and thyroxine and, according to Gross and PittRivers,[7] triiodothyronine as well.

Fig. 1. Sporadic cretin with goiter. (Stanbuty, John, and Hedge, Alice: J. Clin. Endocrinol., **10**:1471, 1950.)

Before the iodide becomes available as organic iodine, it has to be oxidized to free iodine which immediately combines with tyrosine. The oxidation of iodide requires high energy. The finding of peroxidase enzymes in the thyroid by Dempsey et al[8] has a bearing on this problem, since a peroxidase system is the only one with a high enough redox potential to promote this oxidative process. The conversion of diiodotyrosine to thyroxine also requires energy but less than the previous step. Nevertheless, an enzyme system probably promotes this reaction as well.

All these steps in hormone synthesis, except the trapping mechanism, can be blocked by drugs of the thiouracil type. In addition to the development of such a condition by the ingestion of goitrogens, nature has provided a clinical prototype. Sporadic cretinism with goiter on the Eastern seaboard is rare, but it does occur and usually in more than one in a family (see fig. 1).

Two such cases were studied in 1946[9] and it was found that they had normal to high iodine uptakes but their glands contained little iodine (see table 1). This indicated that the glands failed

Table. 1. *Thyroid Data on Two Cretinous Brothers With Goiter.*

	BMR	RaI uptake %	I_2 content of gland %
Case 1	minus 28	87	0.07
Case 2	minus 20	58	....

to synthesize hormone and that the goiters were due to iodine deficiency or to sulfocyanate or cabbage like goitrogens. Stanbury and Hedge[10] have gone a step further. They made radio-iodine studies on three goitrous cretins of one family and on one normal sibling. The glands of the cretins, as well as the normal gland, were able to accumulate iodide in the normal fashion. However, on the administration of potassium thiocyanate the thyroids of the cretins promptly discharged their iodide, whereas the thyroid of the normal sibling retained the iodide (see fig. 2). Thus, these goiters can trap iodide normally but are unable to convert the iodide into hormones. The reason is not known—perhaps the ingestion of an unknown goitrogen or an inherited imperfection in the enzyme system of the thyroid.

The thyroid hormone, manufactured by the cell, is stored in the colloid of the follicle. It is released into the circulation according to the needs of the body. Several years ago it was found[11] that thyroglobulin does not exist as such in the circulation and it was suggested that it is hydrolyzed first before being released into the blood. The finding by DeRobertis[12] of a proteolytic enzyme confirmed this viewpoint.

The circulating hormone of the thyroid is closely attached to the protein molecules and precipitated with them. It cannot be separated from the protein by simple washing. The major portion of it behaves like thyroxine except for about 5 to 10 per cent which behaves like diiodotyrosine.

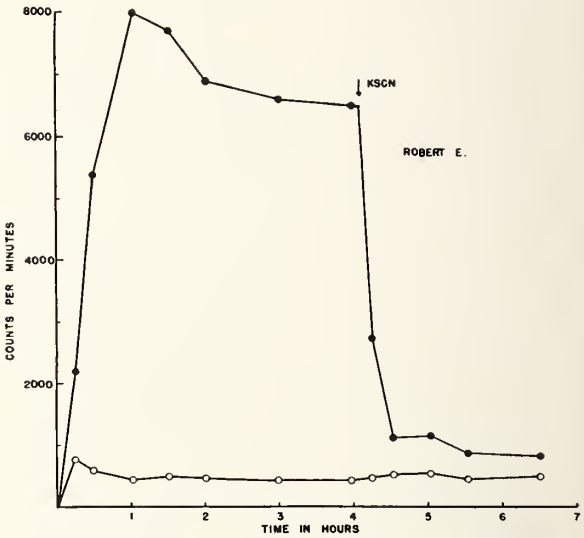


Fig. 2. The radio-active iodine accumulation gradiant on a sporadic cretin with goiter (solid line and solid circles) as compared to a normal sibling (solid line and open circles). Note that on administration of potassium thiocyanate most of the radioactive iodine is displaced from the thyroid. (Stanbuty, John, and Hedge, Alice: J. Clin. Endocrinol., **10**:1071, 1950.)

Since in the normal gland about 70 per cent of the organic iodine is in the form of diiodotyrosine, one must find an explanation for its relative absence from the serum. Three possible explanations occur: (1) The thyroid cell preferentially excretes thyroxine only into the serum. (2) The diiodotyrosine produced in the hydrolysis of thyroglobulin is immediately reincorporated into thyroid protein. (3) Diiodotyrosine is converted

into thyroxine in the cell during the process of hydrolysis or immediately thereafter.

What determines the rate of release of hormone from the gland? At this point one has to introduce the thyrotropic hormone of the pituitary. The functional and anatomic integrity of the thyroid is dependent upon the thyrotropic hormone of the pituitary. The work of Rawson[13] and of Chaikoff[5] suggests that the primary effect of thyrotropic hormone is to mobilize and release the thyroid hormone from the thyroid follicle and that the anatomic changes, increased avidity for iodine and increased synthesis of hormone are secondary changes. Goldsmith, Stanbury and Brownell[14] have amplified this by studying the rate of decay of radio-iodine in thyroids of thyrotoxic subjects given an adequate dose of a blocking drug, namely, 1-methyl 2-mercaptoimidazole. They determined the biologic decay rate of these glands before and after administration of the antithyroid drug. When thyrotropic hormone was injected into these patients, there was a more rapid decay, indicating increased release of thyroid hormone (see fig. 3). It was, therefore, concluded that thyrotropin causes release of hormone independent

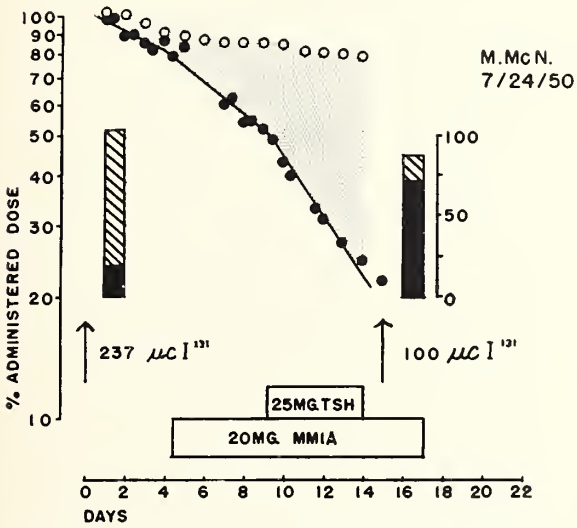


Fig. 3. The effect of a thyroid blocking agent alone and in combination with thyrotropic hormone on the biologic decay of radio-active iodine in a thyrotoxic patient. The first group of solid circles represents the rate of loss of radioactivity from the thyroid before any drug is administered. The second portion of the curve shows the more rapid loss of radio-activity when methyl mercaptoimidazole is administered. The final portion of the curve shows a still more rapid loss of radio-activity from the thyroid when thyrotropic hormone is added in dosage of 25 mg. daily. Of the upright column at either end of the graph, the solid portion represents the forty-eight hour urinary excretion of radio-active iodine, and the crosshatched portion represents the forty-eight hour uptake by the thyroid of radio-active iodine.

of effects on the trapping of iodide or the synthesis of thyroid.

The effect of thyroid stimulating hormone on the thyroid raises the question of the etiology of Graves' disease and with that the mechanism of the response of patients with Graves' disease to the administration of iodide. In 1938 Dr. Means and I[15] analyzed the iodine response curves of thyrotoxic patients and compared them to the thyroxine decay curves. We found that the iodine response curve is a continuation of thyroxine decay (see fig. 4). In other words, iodine blocks

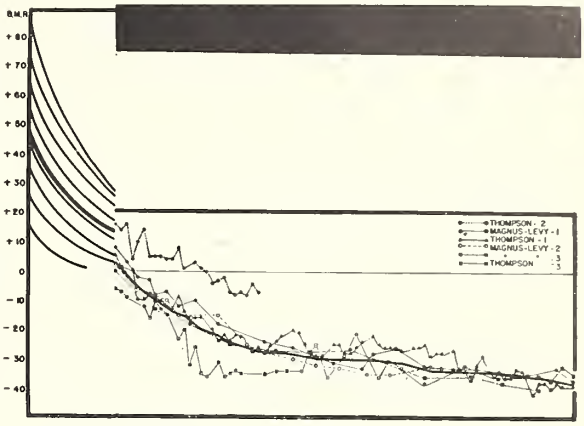


Fig. 4. The solid curves on the left represent the iodine response curves at different levels of metabolism. The remainder of the curves represent the metabolic response of patients with myxedema who had been made euthyroid by the administration of thyroid hormone, and then the hormone was omitted. This portion is called thyroxine decay. Note that the thyroxine decay curve is a continuation of the iodine response curve.

the release of thyroid hormone from the gland. The experiments of Rawson[13] throw some light on this mechanism. He found that when thyrotropin acts upon the thyroid, it becomes inactivated. However, iodine interferes with this inactivation. Similarly, patients with Graves' disease do not excrete any thyrotropin in the urine, but after iodine medication they do excrete thyrotropin. Rawson[16] further showed that glands of Graves' disease blocked by thiouracil still undergo involution when iodine is administered—the iodinating action of iodine is different from its involuting action.

The action of iodine may then be explained as follows: iodine stops the reaction between thyrotropic hormone and thyroid cells so that release of hormone is stopped. However, the manufacture of thyroglobulin continues and becomes stored in the follicles. When the gland is not blocked by thiouracil, the stored hormone is iodinated by the iodine; if blocked by thiouracil, iodine incorporation does not take place and the stored protein is free from it. Such a protein has no calorigenic activity. However, this theory does not explain why iodine does not have a similar action in normal glands. The experimental findings of Rawson[13] that normal glands inactivate less thyrotropic hormone than thyrotoxic glands may explain this discrepancy—a difference in end-organ sensitivity to thyrotropin between the normal and thyrotoxic glands may be the cause.

The thyroxine molecule may be regarded as the active principle of the thyriod. It is the only

known hormone which is an amino acid and contains a diphenylether linkage with four iodine atoms (see fig. 5). For many years I have studied the physiologic activity of analogues and derivatives of thyroxine with two purposes in mind: (1) To learn of the role played by the several structural components of thyroxine in determining its physiological activity; (2) to obtain a compound which might depress the pituitary and the thyroid in the same way that thyroxine does, but without increasing the oxygen consumption. Naturally occurring thyroxine is laevorotatory. When one administers pure dextrorotatory thyroxine, it produces a response about one tenth that of pure 1-thyroxine. Consequently, the activity resulting from the ordinary racemic thyroxine comes primarily from its 1-thyroxine component.

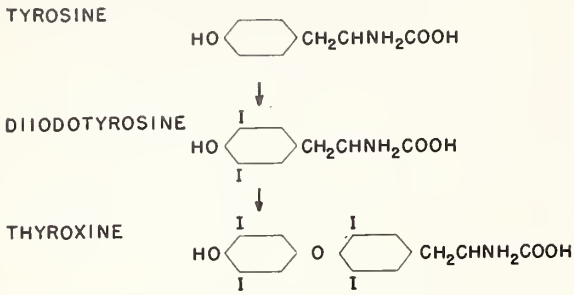


Fig. 5. Chemical formulation of thyroxine from its precursors of tyrosine and diidotyrosine.

What is the importance of the diphenyl skeleton? Diiodotyrosine, containing a single benzene ring, has little physiologic activity, about 0.005 per cent as compared to 1-thyroxine. Thyronine, which is thyroxine without the iodine atoms, also has little or no activity. All other diphenyl compounds which contain halogens are much more active than diiodotyrosine. The compound 3-5 diiodothyronine, which is throxine minus two iodine atoms, has an activity of about 1.3 per cent that of 1-thyroxine. The position of the iodine atoms is important. The activity of 3′ 5′ diiodothyronine is unknown. However, 2′ 6′ diiodothyronine has little or no activity.

The substitution of bromine for iodine or chlorine for iodine diminishes the activity of the thyroxine molecule considerably. Tetrabromthyronine has 3.0 per cent the activity of thyroxine and tetrachlorthyronine only 0.2 per cent the activity of thyroxine. According to Lipmann and DuToit[17] the tetranitrothyronine derivative is even less active than tetrachlorthyronine—about 0.07 per cent as active as 1-thyroxine.

Thus it appears that the diphenyl structure is more important than the right halogens, but the right halogens and the position of the halogens are also important.

Alterations in the side chains also affect the activity of the molecule. Thus N-acetyl 1-thyroxine has about 20 per cent of the activity and N-acetyl dl-thyroxyl 1-glutamic acid has about 6 per cent of the activity of 1-thyroxine. Thyroxamine, which is thyroxine without the carboxyl group, was found by Gaddum[18] to have little or no activity, but according to Niemann[19] other investigators have found it quite active. When a methyl group is substituted in the hydroxy position to form the methyl ether of thyroxine, the activity is about 6 per cent that of 1-thyroxine. The substitution of sulfur for oxygen in the ether linkage results in a compound, the racemic form of which has 10.0 per cent of the activity of 1-thyroxine.

It is, therefore, clear from examination of figure 6 that any alteration in the structure of thyroxine reduces its physiologic activity, the greatest reduction occurring when the carboxyl group is removed or when the iodines are in abnormal position. Nature has found that diphenyl alanine is essential, and that it must contain two or more atoms of halogen, preferably iodine. With these building blocks, nature has evolved the most active compound possible.

Do the analogues of thyroxine with diminished physiologic activity depress the pituitary and the thyroid when administered to animals or humans? As indicated in table 2 the administration of tetrabrom- or tetrachlor-thyronine diminishes the protein bound iodine of the blood in patients with Graves' disease, proving depression

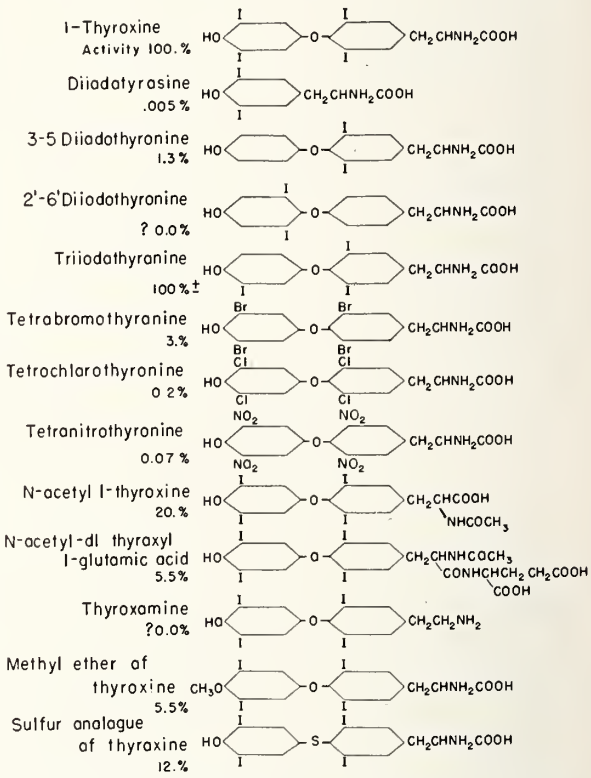


Fig. 6. Structural formulae and relative activity of various isomers and analogues of thyroxine.

of thyroid function. However, the metabolism of these patients was unchanged or only slightly depressed, indicating that the depressing effect on the pituitary and on the thyroid is proportional to the metabolic effect of each compound.

One final point bearing on the physiology of the thyroid. How does the thyroid hormone influence the target? Little is known about this. Although thyroxine is an accelerator of the metabolic processes in all tissues, it depresses the cells of the pituitary which elaborate thyrotropic hormone and depresses thyroid cells as well. Undoubtedly the solution lies in the field of enzymology. According to Lipmann[20] it does not affect the permeability of cell membranes. It releases energy which is converted into something useful for the cell, unlike dinitrophenol which also releases energy but it is all degraded into heat.

THYROID VERSUS OTHER ENDOCRINES

It has long been known that the function of the thyroid is dependent upon the function of the pituitary. Thyrotropic hormone stimulates the thyroid and destruction of the pituitary results in atrophy of the thyroid follicles. Conversely, thyroid administration depresses the thyroid stimulating hormone of the pituitary and removal of the thyroid results in excessive production of thyrotropic hormone. On the clinical side, it became evident several years ago that there were two types of myxedema, one due to primary thyroid failure and the other due to pituitary failure with secondary thyroid atrophy. In the differential diagnosis of myxedema considerable weight is given to concomitant absence or diminution of various tropic hormones of the pituitary or of adrenocortical failure. However, recent studies by Statland and myself[21] indicate that primary myxedema of itself may depress pituitary and adrenal function. More recent work in our Clinic indicates that primary myxedema depresses or inhibits LH function, resulting in amenorrhea or metropathia hemorrhagica.

Table 2. *Effect of Tetrabrom- and Tetrachlorthyronine on Protein Bound Iodine in Graves' Disease.*

	Dosage	Duration (days)	Protein-bound Iodine	
			before medication	after medication
Tetrabromthyronine	5-20 mg.	29	24γ%	8.8γ%
Tetrachlorthyronine	75-100 mg.	11	39-40γ%	17.γ%

As a result of depression of adrenal and pituitary function, excretion of follicle stimulating hormone and the 17-Ketosteroids in the urine is low. This reduced excretion of 17-Ketosteroids is not affected by therapy except in the premenopausal female.

The Cutler-Power-Wilder salt restriction test was done on seven patients before and after thyroid medication. It was normal in all but one patient. This patient showed evidence of adrenal failure on this test with complete recovery three months after treatment. Another patient probably had Addison's disease in association with myxedema.

The excretion of 11-oxycorticosteriods was depressed in all patients with myxedema, but often in the low range of normal. The eosinophil counts were generally higher than normal and the response to adrenalin was within the lower limits or normal. Treatment resulted in a tendency to return to normal levels. The insulin tolerance test suggested insulin resistance and hypoglycemia unresponsiveness, which might be on the basis of impaired adrenocortical function or on the basis of diminished circulation and transport of sugar. These tests became normal after therapy.

As a result of these studies it was concluded that myxedema could be divided into five categories:

1. Primary myxedema unassociated with dysfunction of either the pituitary or the adrenals.
2. Primary myxedema with secondary depression of adrenocortical function.
3. Primary myxedema with secondary depression of pituitary function. Category number two may be part of this one.
4. Primary myxedema and Addison's disease.
5. Pituitary myxedema, as described in our Clinic, in which both the thyroid and adrenals fail secondarily to hypopituitarism.

There is relatively little known of the state of the adrenal function in Graves' disease. Studies by Maloof[22] indicates that excretion of 17-Ketosteroids in the urine is often depressed. A few patients show an abnormal Kepler water test and an occasional patient actually has an adrenal crisis when subjected to the Cutler-Power-Wilder test. The mechanism for adrenocortical hypofunction is undoubtedly different in Graves' disease than it is in myxedema—in the latter it is due to myxedematous changes in the adrenal or pituitary; in the former it is probably due to exhaustion of the adrenal cortex. This exhausted state of the adrenals in hyperthyroidism gives theoretically an adequate basis for the treatment of thyrotoxic crises with adrenocortical hormones.

What effect does ACTH and cortisone have on thyroid function? Money et al[23] demonstrated that both cortisone and ACTH significantly depress the radioactive iodine uptake of the thyroid in rats. Hardy et al[24] found decreased protein bound iodine in the blood of three patients receiving cortisone or ACTH over a period of seven to ten days. In a more extensive study Wolfson et al[25] described "corticogenic hypothyroidism" in which the basal metabolic rate is low, the protein bound iodine below 4.0 micrograms per cent, radioactive iodine uptakes in the myxedema range and elevated serum cholesterols, which promptly drop on administration of small amounts of thyroid.

They suggested that these functional changes are due to decreased secretion of thyroid stimulating hormone. They emphasize that this type of hypothyroidism diminishes the response to constant doses of ACTH or cortisone with prompt improvement upon the addition of thyroid. One sees an

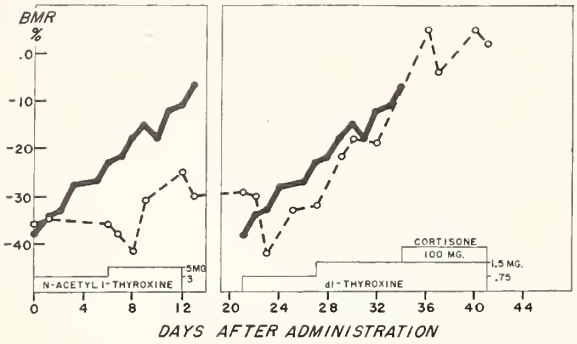


Fig. 7. The left portion illustrates the failure of a patient with myxedema to respond to N-acetyl 1-thyroxine; the right shows the failure of this patient to respond to dl-thyroxine in amounts equivalent to the standard of thyroxine polypeptide (solid black line). The response is partial when dl-thyroxine is doubled but adequate only when Cortisone is administered simultaneously.

occasional analagous situation in the management of myxedema when a patient making a substandard response to thyroid, will, on addition of cortisone, develop a normal metabolic response to the same dose of thyroid hormone (see fig. 7).

That the thyroid and ovaries are interrelated is well substantiated by clinical and experimental data (see review by Lerman[26]). Sometimes these relationships are mediated by the pituitary. As indicated previously, the excretion of follicle stimulating hormone in myxedema is usually reduced. Studies by Goldsmith et al[27] in our Clinic have shown that the majority of patients with primary myxedema (eight out of ten) develop profuse bleeding or amenorrhea. These changes are due to failure of LH production resulting in a nonsecretory endometrium and absence of pregnandiol in the urine. Administration of thyroid results in rapid return of the normal menstrual pattern. In males this depression of LH function is evidenced by absence or diminution of the Leydig cells in some cases. In hyperthyroidism the characteristic menstrual pattern is oligomenorrhea or amenorrhea. Nevertheless, the endometrium is usually normal and the excretion of pregnandiol in the urine is normal. Four of eighteen patients had amenorrhea, decreased estrogenic activity and failure of ovulation. All abnormalities rapidly returned to normal when the patients became euthyroid.

The experimental data regarding the influence of gonadal hormones on the thyroid is quite conflicting. It has been claimed that estrogens or gonadotropic hormones induce remissions in hyperthyroidism. In my own experience, estrogens do not alter the metabolism in either hyperthyroidism or in euthyroid states. However, pregnancy does affect thyroid function. In the first trimester there is a rise in the basal metabolic rate, elevated protein bound iodine[28] and probably an increased uptake of radio-active iodine. The fetus does not begin to take up radio-active iodine until after the twelfth week.[29]

It is well known that either hyperthyroidism or hypothyroidism may lead to sterility or miscarriage. On the other hand, thyroid hormone is one of the most useful drugs in the treatment of sterility and habitual abortion. Sterility patients should receive a moderately large does of thyroid hormone and maintained on it for several years if necessary. In general, it is more likely to benefit patients with a low metabolism than those with a normal metabolism and those patients who have abnormal periods than those with normal periods.

The administration of thyroid has been more successful in habitual abortion than in sterility. I have treated a fairly large series of such patients with thyroid only, in doses ranging from 0.1 to

DIAGNOSIS	BMR	PBI (SERUM)	RAI (UPTAKE)
NORMAL OR EUTHYROID	↔	↔	↔
THYROTOXICOSIS OF GRAVES' DISEASE	↑	↑	↑
THYROID ADENOMA WITH HYPERTHYROIDISM	↑	↑	↑
HYPERTHYROIDISM PERSISTING ON IODINE	↑	↑	↓
HYPERTHYROIDISM FACTITIA	↑	↑	↓
HYPEROPHTHALMOPATHIC GRAVES' WITH EUTHYROIDISM	↔	↔	↔
PRIMARY MYXEDEMA	↓	↓	↓
PITUITARY MYXEDEMA	↓	↓	↓
IODINE WANT	↔	↔	↑
END-ORGAN INSENSITIVITY TO THYROID HORMONE (THEORETICAL)	↓	↑	?

Fig. 8. The direction of the BMR, PBI and RAI uptake in the normal and various thyroid conditions.

0.3 grams or more daily. Attempt is made to obtain the maximum metabolic response in the second and third month and to taper off in the last three months. Several of these patients had been previously treated with large doses of es-

trogen or progesterone unsuccessfully. Undoubtedly the first few months of treatment are the most important.

The action of thyroid in these conditions is not specific but rather is part of its pharmacologic effect in augmenting the metabolism of the ovaries or of the pituitary and of its influence upon the growth and differentiation of tissues.

Before turning to the management of various forms of thyroid disease one should consider the use of the newer tests in differential diagnosis, namely the radioactive iodine uptake and the protein bound iodine in the blood, in addition to the time honored basal metabolic rate. No test is any better than any one of the others. Each one evaluates the thyroid function from a different point of view. The basal metabolic rate determines the impact of the hormone on the peripheral tissues, protein bound iodine is a measure of the circulating hormone and the radioactive iodine uptake measures the avidity of the thyroid for iodine.

In figures 8 and 9 are listed the results of these tests in various thyroid disorders and in some nonthyroid conditions. The normal protein bound iodine varies between 4 and 7γ per cent and the radio-active iodine uptake varies between 25 and 50 per cent of an administered tracer dose. As indicated before, in an area of iodine want the radio-active iodine uptake is much greater than this norm—it may go up to 90 per cent of the tracer dose. In true hyperthyroidism all three tests are elevated, as to be expected. In hypothyroidism, primary or secondary to pituitary failure, all three tests are depressed. In patients with hyperthyroidism receiving iodine the basal metabolic rate and the protein bound iodine may be elevated, but the radio-active iodine uptake will be depressed because the gland, saturated with iodine, is inhibited from trapping any more. In thyrotoxicosis factitia, a condition in which the patient surreptitiously takes large amounts of thyroid, the basal metabolic rate and the protein bound iodine are elevated, but since ingested thyroid artifically depresses the activity of the subject's own thyroid, radio-active iodine uptake is low. This should give a clue to the diagnosis. This pattern of tests is also found in the early stages of acute or subacute thyroiditis. The basal metabolic rate is slightly elevated, the protein bound iodine elevated because thyroid tissue is being destroyed and absorbed into the blood stream and the radio-active iodine uptake is in the neighborhood of zero per cent.

The diagnosis of masked hyperthyroidism is always difficult, especially if associated with cardiac failure. The basal metabolic rate is usually elevated in patients with cardiac failure so that it does not help in differential diagnosis. Since masked hyperthyroidism is a disease of older persons, and of long duration, the goiter is usually nodular and well involuted. Consequently, the avidity of such a goiter for iodine may be within the normal range. If so, the measure of the protein bound iodine in the blood is of greatest diagnostic value.

Of the conditions listed in figure 9, pregnancy and pheochromocytoma are of interest. In pregnancy the metabolism and protein bound iodine

DIAGNOSIS	BMR	PBI (SERUM)	RAI (UPTAKE)
ANOREXIA NERVOSA	↓	↓	↓
STARVATION	↓	↓	↓
NON-MYXEDEMATOUS HYPOMETABOLISM	↓	↔	↔
HYPERMETABOLISM WITHOUT THYROTOXICOSIS	↑	↔	↔
DINITROPHENOL POISONING	↑	↓	↔
NEPHROSIS	↓	↓	↔
PREGNANCY	↑	↑	?
PHAEOCHROMOCYTOMA	↑	↔	↔
LEUKEMIA	↑	↔	↔
ADDISON'S DISEASE	↓	↔	↔

Fig. 9. The direction of the BMR, PBI and RAI uptake in the various nonthyroid conditions in which the BMR is abnormal.

are elevated. What is the state of the radio-active iodine uptake? I do not know for certain, but it is probably high. In pheochromocytoma the metabolism may be elevated and the clinical picture simulates hyperthyroidism. However, the protein bound iodine and radio-active iodine uptake are normal .

HYPOTHYROIDISM

Administration of thyroid orally to patients with primary myxedema offers perfect substitution therapy. Parenteral thyroxine is equally effective but possesses no advantage over oral thyroid. Sometimes it is difficult to distinguish between primary myxedema and myxedema due to pituitary failure. In such a case, if the feeding of thyroid in full dosage results in an Addisonian crisis, the diagnosis of pituitary myxedema is established. However, one should make every effort to arrive at a differential diagnosis be-

fore thyroid is administered. The ideal treatment of hypopituitarism also would be replacement therapy. Unfortunately, no such preparations are available. The treatment resolves itself into treatment of thyroid hypofunction plus the associated hypogonadism and hypoadrenocorticism. Thyroid in small doses up to 60 mg. a day should be used plus additional salt in food and by mouth to protect against adrenal failure. In addition, testosterone in dosage of 10 to 25 mg. twice a week or cortisone 25 to 50 mg. a day, or both, are useful. In females, estrogens may be used in conjunction with testosterone or in place of testosterone. In young patients of either sex, chorionic gonadotropin may stimulate the gonads to supply an adequate amount of hormone.

325 PATIENTS TREATED WITH I^{131}
AUGUST, 1946 TO JAN., 1952

Responded to 1 Dose	248
Responded to 2 Doses	25
Responded to 3 Doses	7
Responded to 4 Doses	1
Better but toxic 6 months after	
1 Dose	11
2 Doses	6
3 Doses	3
Treated within 4 months	13
Died months to years after responding	11

Fig. 10. The response of 325 patients with Graves' disease to the administration of radio-active iodine. Note that 292 (90 per cent) of the total number of patients responded satisfactorily to one or more doses of radio-active iodine.

HYPERTHYROIDISM

For many years the best treatment of Graves' disease was subtotal thyroidectomy following iodine remission. External radiation was used with variable success and iodine alone was used in a few cases with mild form of the disease. The introduction of thiourea compounds by Astwood[30] in 1943 was an important advance in the management of hyperthyroidism. Thiouracil produces a prompt remission in patients who have not previously received iodine and permits the control of the thyrotoxicosis more adequately than iodine alone. At the Massachusetts General Hospital propyl thiouracil or mercaptoimidazole is used preliminary to surgery to produce remission. When the patient's metabolism is reduced to within normal range, iodine is administered for a week to ten days to cause involution.

We have not used the drug extensively as the sole treatment of hyperthyroidism. Experience in many clinics has shown that after one or two years of treatment with thiouracil 30 to 50 per cent of the patients have recurrence of their hyperthyroidism on omission of the drug. Secondly, the danger of malignant degeneration must be kept in mind. When thiouracil blocks the synthesis of hormone, there is eventually an increased production of thyrotropic hormone which causes intense hyperplasia of the thyroid. Any organ undergoing intense hyperplasia may develop benign or malignant neoplasia. As early as 1944, Bielschowsky[31] reported development of neoplasms in thyroids of rats given thiourea and a carcinogen. Since then other investigators have obtained benign and malignant tumors in the thyroids of animals exposed to thiourea alone. The goiters of endemic and sporadic cretins contain adenomas and, according to Marine, the endemic goiters have a high incidence of malignancy. Although there has been no significant increase in the incidence of carcinoma in patients receiving thiouracil over a long period of time for Graves' disease, one must still keep this possibility in mind. This should be true especially in patients with toxic nodular goiters because such goiters may contain benign adenomas and it would be more serious to expose such adenomas to thyrotropic stimulation over a long period of time.

The introduction of radio-active iodine by Hertz[32] to the study and treatment of thyroid diseases was an important advance. Since then some three hundred and fifty patients have been treated in our Clinic by Dr. Earl Chapman.

In our Clinic a single dose is administered, taking into account the degree of uptake of a tracer dose of radio-active iodine and the size of the goiter. It is impossible to evaluate the effect of irregular distribution of radio-active iodine, or of the sensitivity of the cells to radiation. Response to treatment usually occurs within six to eight weeks, although in some patients maximum effect may take four months. Because of this long latent period before radiation takes effect, the severely thyrotoxic patients may run some risk of being toxic too long. Consequently, such patients are controlled first by propyl thiouracil until their toxicity is considerably reduced. The thiouracil is then omitted and two or three days later the radiation dose administered. This procedure is carried out in about 5 per cent of all treated patients. The radiation effect usually takes place before the patient becomes toxic again. It is easy to overtreat so that the incidence of myxedema is greater than after subtotal thyroidectomy. Those patients who do not respond after the first dose are given a second dose, but not before six months. Occasionally a third dose has to be given. A small number of patients fail to respond to a second or third dose and surgery must be resorted to.

The great majority of patients respond satisfactorily and become euthyroid (see fig. 10). It is un-

doubtedly the best available form of therapy for Graves' disease. There is no damage to the parathyroids or other adjacent structures, nor is there damage to distant structures. It cannot be denied that the heavy radiation necessary to relieve the hyperthyroidism may eventually result in malignant degeneration of the thyroid gland or of its neighboring structures. Although up to the present no case of carcinoma of the thyroid has been attributed to radio-active iodine radiation, and Dobyns et al [33] have found no evidence of malignancy in thyroid tissue obtained eight years after the administration of radio-active iodine, the danger of such an eventuality cannot be excluded before another ten to fifteen years have elapsed.

From the beginning of the use of radio-active iodine attempts were made to assay its effects in animal thyroid tissue. At the Massachusetts General Hospital, Maloof, Dobyns and Vickery[34] studied the effect of graded doses of radio-active iodine, varying from 1 to 300 microcurie, administered to normal rats and observed at various intervals up to one and one half years. The largest dose destroyed the thyroid completely. The smaller doses produced functional changes in the thyroid before histologic changes were evident, namely, decreased capacity to take up iodine or to hypertrophy in response to a low iodine intake, and decreased capacity to hypertrophy in response to administration of thiouracil (see fig. 11). The most pronounced histologic changes were a

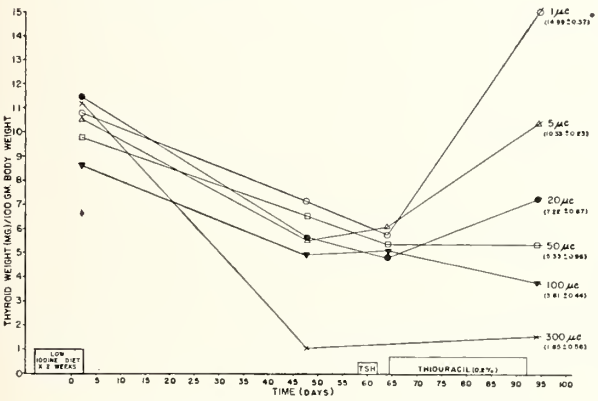


Fig. 11. The response of rats' thyroids following the administration of various doses of radio-active iodine as measured by thyroid weight. The dosage given initially to each group of rats is indicated on the right hand side of the chart. The thyroid weights of all groups of animals decreased progressively. They failed to increase on the administration of thyrotropic hormone. The ability of these thyroids to hypertrophy on the administration of thiouracil was definitely impaired with the higher dosages. With a 300 microcurie dose the rats' thyroids were completely destroyed.

persistent increase in cell height and bizarre nuclear changes, which were still present eighteen months after radiation. These observations suggested that the mechanism of cellular division is impaired by radiation, but not that of cellular hypertrophy. Aside from the bizarre nuclear changes, no evidence of malignancy was observed (see fig. 12). On the other hand, Goldberg and Chaikoff[35] studied the effects of a single dose of 400 microcurie of radio-active iodine in twenty-five rats, killed at the end of one and one half to two years. They found seven instances of carcinoma of the thyroid, five of which had metastases. The bizarre nuclear changes observed by Maloof et al, and the findings by Goldberg and

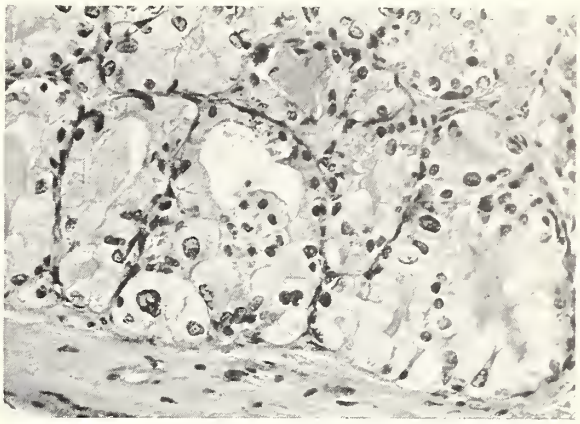


Fig. 12. The histologic appearance of rats' thyroid after receiving 100 microcurie of radio-active iodine ninety-four days previously. Note large cells and bizarre nuclear changes.

Chaikoff, should make one cautious about the unrestricted use of radio-active iodine in humans.

Except for the hazard of carcinogenesis, radio-active iodine therapy of Graves' disease is the most satisfactory one available. It is the therapy of choice in any patient whose life expectancy is not more than twenty-five years. It is the preferred therapy in a patient whose condition does not warrant surgery. It is certainly preferable to surgery in any patient who has recurrence of hyperthyroidism after one or more previous thyroidectomies. Occasionally it must be used in a young person who might have an abnormal psychologic reaction to surgery.

Should radioactive iodine be used in toxic nodular goiter? We have avoided its use for three reasons: (1) The incidence of carcinoma is significantly higher in nodular goiter with hyperthyroidism than in diffuse goiter. Consequently, if carcinoma cannot be excluded clinically, thyroidectomy should be carried out. Moreover, a benign adenoma exposed to radiation might have a greater chance of becoming malignant than hyperplastic tissue. (2) Since toxic nodular goiters are more resistant to radiation, the dosage required is higher, and repeated dosages are more likely. Consequently, the time necessary to reach a euthyroid state is greatly prolonged. (3) Even though radiation may control the toxicity, some of the nodules persist and will require resection at a future date. The latter sequence of procedures is sometimes indicated in a toxic patient complicated by severe heart disease. As a rule such a patient responds poorly to

iodine and it may take several months for thiouracil to reduce his toxicity. Therefore, radioactive iodine is used to bring him to an operable state.

In spite of these objections, radio-active iodine will control such patients, with or without cardiac complications, if surgery is deemed too hazardous.

A word about malignant exophthalmos which occasionally complicates Graves' disease. There is suggestive evidence that this results from excessive production of thyrotropin or related substances by the pituitary. It may occur when the patient is toxic or euthyroid, but most often when the patient is on the low side of normal or hypothyroid. It may occur after any form of treatment. The worst forms of the disease seem to occur when the patient's metabolism is subnormal. Consequently, the administration of thyroid to prevent this hypometabolism is a proper procedure, although one cannot always be sure that it helps.

CARCINOMA OF THE THYROID

The destructive action of radio-active iodine has also been applied to the treatment of carcinoma of the thyroid. In a series of 120 patients studied at the Massachusetts General Hospital by Dobyns and Maloof[36] some thirty-seven of eighty-six tested took up detectable amounts of radio-active iodine. Detection of radioactivity was carried out in one of three ways: (1) directional counting over the tumor or metastases, (2) digestion of a small amount of tissue removed at operation and counting it, (3) radio-autographs. The latter method was the most reliable. Not all thyroid cancers collect appreciable amounts of radioactive iodine. The follicular adenocarcinomas collect more radio-active iodine than the others. The undifferentiated carcinomas usually do not take up any radioactivity but when they do, the amount is barely detectable.

With rare exceptions, cancer of the thyroid or their metastases do not pick up sufficient radioactive iodine to be of therapeutic value. Consequently, two methods have been employed in an attempt to induce these lesions to increase their uptake: (1) total thyroidectomy of the normal thyroid, (2) administration of thiouracil compounds after total thyroidectomy. This has been done in sixty cases of this series.

The plan has been to remove all cancer tissue as well as normal tissue if possible, once the diagnosis has been established by the surgeon. This places the burden of thyroid hormone production entirely on the residual cancer or its metastases. As a result of this maneuver the metastases of an appreciable number of follicular, mixed follicular and papillary carcinomas have been induced to take up sufficient amounts of radio-active iodine to be of therapeutic value. The undifferentiated and the papillary cancers were seldom induced to take up appreciable amounts of iodine.

Increased production of thyroid stimulating hormone following ablation of the normal thyroid may induce the cancer to grow more rapidly. Dobyns and Maloof[36] have expressed the opinion that those metastases which have a tendency toward growth following thyroidectomy are the ones which have the greatest avidity for radioactive iodine and are also the most effectively treated with radio-active iodine.

Large doses of radio-active iodine have also been used initially to destroy the normal thyroid function in this type of patient. There are several objections to this method, among them the time interval before myxedema develops, the uncertainty of the procedure and the fact that radiation of the thyroid may interfere with subsequent uptake of radio-active iodine by the metastases for a long time. On the other hand, any residual thyroid tissue after thyroidectomy can easily be destroyed by a small dose of radio-active iodine.

Thiouracil compounds have been used in those patients in whom thyroidectomy did not induce sufficient radio-active iodine uptake. In most patients such treatment will enhance the activity of the tumors, sometimes sufficiently to warrant therapy with radio-active iodine. Rawson[37] has worked out the following criteria: (1) A thyriod tumor which is localized and operable should be treated surgically, surgery being the only curative procedure; all other methods are only palliative. (2) A tumor or its metastases should be capable of concentrating enough radio-active iodine to be cancericidal. (3) Normal thyroid should be removed before use of radio-active iodine. This, plus administration of thiouracil compounds in large doses for several months produces the maximum avidity for iodine by the tumor or its metastases. The uptake should reach about 70 per cent of the test dose. (4) Although tumors with follicular structure are the ones most likely to take on function, thyroidectomy and thiouracil should be tried in all cases with metastases; a few of the others will also take on moderate function. (5) The calculated total body irradiation delivered by I^{131} must be within the range of safety. This can be determined from frequent measurements of radio-active iodine in the blood.

NODULAR GOITER

The management of nodular goiter has caused a great deal of controversy. Since the incidence of malignancy in a single nodule is 15 to 20 per cent, the policy in our Clinic is to remove all such single nodules. In the particular type of tumor, directional counting after a tracer dose of radio-active iodine has proved useful. If there is high activity over a nodule there is less chance of its being malignant; if there is no activity the chance of its being malignant is much greater, although a colloid cyst or a localized area of inflammation are also inactive.

The treatment of multiple nodular goiter is not so

simple. There are some who say that subtotal thyroidectomy should be done in all such cases since there is a 7 to 8 per cent incidence of malignancy. Attempts have been made to treat such nodules with thyroid hormone. As far as I can make out this will, in some instances, shrink the paranodular tissue and make the nodules more discrete and more easily palpable. Again, if a directional counter reveals inactivity over a given area, the suspicion of malignancy increases and surgery should be resorted to. It should be remembered that neoplastic nodules frequently occur in among colloid nodules.

THYROIDITIS AND HASHIMOTO'S STRUMA

Acute and subacute thyroiditis is a nonsuppurative disease, probably due to a virus and runs a self limiting course with remissions and exacerbations. The process may be localized or diffuse. When diffuse, the function of the gland, as measured by the radio-active iodine uptake, is close to zero but the patient remains euthyriod. Frequently the metabolism is slightly elevated as well as the protein bound iodine. It has been said that thiouracil or thyrotropic hormone causes improvement, at least temporarily. If pressure symptoms result, or if the question of malignancy cannot be ruled out clinically, then surgery must be resorted to. It is possible that acute thyroiditis may progress into a chronic form.

The management of struma lymphomatosa is somewhat simpler, although the etiology is unknown. In many cases surgical resection is necessary because of pressure symptoms; in still others it is difficult to differentiate it from neoplasm. Consequently, a biopsy is essential. An extensive study of this disease at the Massachusetts General Hospital by Statland, Wasserman and Vickery[38] has shown the effectiveness of thyroid medication in preventing recurrence of tissue after thyroidectomy. At the present we biopsy this type of goiter for diagnosis and then treat with thyroid hormone in moderate dosage in the hope of shrinking it without further surgery.

Dr. Means, in his Thayer lectures[39] devotes a few paragraphs to indicate the trend of future research in thyroid disease. I should like to do likewise. First, the action of thyroid hormone should be studied extensively. By this I refer to the fundamental changes that take place once the hormone enters the cell. This type of study delves into the fundamental nature of cell physiology. Secondly, an intensive study of the pituitary- thyroid cycle is in order. How does the central nervous system control this? How does thyroid stimulating hormone affect the thyroid or other tissues? There is great need for technics for measuring quantitatively thyrotropic hormone in the blood and in the urine. Finally, an intensive study is needed of the interrelationships between the thyroid hormone and other hormones, and of thyroid diseases and other endocrine and nonendocrine diseases.

370 Commonwealth Ave.

BIBLIOGRAPHY

1. Kendall, E. C.: The Isolation in Crystalline Form of the Compound Containing Iodine which Occurs in the Thyroid; Its Chemical Nature and Physiological Activity, Tr. A. Am. Physicians **30**:420, 1915.
2. Harington, C. R.: Isolation of Thyroxine from the Thyroid Gland, Biochem. J. **20**:300, 1926.
3. Harington, C. R., and Barger, G.: Constitution and Synthesis of Thyroxine, Biochem. J. **21**:169, 1927.
4. Stanbury, J. B.; Brownell, G. L.; Riggs, D. S.; Perimetti, H.; DelCastillo, E., and Itoiz, J.: The Iodine-Deficent Human Thyroid Gland, J. Clin. Endocrinal. **12**:191, 1952.
5. Chaikoff, I. L., and Taurog, A.: Studies on the Formation of Organically-Bound Iodine Compounds in the Thyroid Gland and Their Appearance in Plasma as Shown by the Use of Radioactive Iodine, Ann. New York Acad. Sc. **50**:377, 1949.
6. Wyngaarden, J. B.; Stanbury, J. B., and DuToit, C. H.: On the Mechanism of Iodide Accumulation by the Thyroid Gland, J. Clin. Endocrinol. **11**:1259, 1951.
7. Gross, J., and Pitt-Rivers, R.: The Identification of 3:5:3′-1-Triiodothyronine in Human Plasma, The Lancet **1**:439, 1952.
8. Dempsey, E. W.: The Chemical Cytology of the Tryroid Gland, Ann. New York Acad. Sc. **50**:336, 1949.
9. Lerman, J.; Jones, H. W., and Calkins, E.: Studies on Two Sporadic Cretinous Brothers with Goiter, Together With Some Remarks on the Relation of Hyperplasia to Neoplasia, Ann. Int. Med. **25**:677, 1946.
10. Stanbury, J. B., and Hedge, A. N.: A Study of a Family of Goitrous Cretins, J. Clin. Endocrinol. **10**:1471, 1950.
11. Lerman, J.: Iodine Components of the Blood. Circulating Thyroglobulin in Normal Persons and in Persons with Thyroid Disease, J. Clin. Investigation **19**:555, 1940.
12. DeRobertis, E.: Cytological and Cytochemical Bases of Thyroid Function, Ann. New York Acad. Sc. **50**:317, 1949.
13. Rawson, R. W.: Physiological Reactions of the Thyroid-Stimulating Hormone, Ann. New York Acad. Sc. **50**:491, 1949.
14. Goldsmith, R. E.; Stanbury, J. B., and Brownell, G. L.: The Effect of Thyrotropin on the Release of Hormone from the Human Thyroid, J. Clin. Endocrinol. **11**:1079, 1951.
15. Means, J. H., and Lerman, J.: The Curves of Thyroxine Decay in Myxedema and of Iodine Response in Thyrotoxicosis: Their Similarity and its Possible Significance, Ann. Int. Med. **12**:811, 1938.
16. Rawson, R. W., Moore, F. D., Peacock, W., Means, J. H., Cope, O., and Riddell, C. B.: Effect of Iodine on the Thyroid Gland in Graves' Disease when given in Conjunction with Thiouracil. A Two-action Theory of Iodine, J. Clin. Investigation **24**:869, 1945.
17. Lipmann, F. and DuToit, C. H.: Personal Communication.
18. Gaddum, J. H.: Quantitative Observations on Thyroxine and Allied Substances. II Effects on Oxygen Consumption of Rats, J. Physiol. **68**:383, 1930.
19. Niemann, C.: Thyroxine and Related Compounds, Fortschritte der Chemie Organischer Naturstoffe. Wien-Springer, 1950.
20. Lipmann, F.: Personal Communication.
21. Statland, H., and Lerman, J.: Function of the Adrenal Cortex in Myxedema, with Some Observations on Pituitary Myxedema, J. Clin. Endocrinol. **10**:1401, 1950.
22. Maloof, F.: Unpublished Data.
23. Money, Wm. H.; Kirshner, L.; Kruntz, L.; Merrill, P., and Rawson, R. W.: Effects of Adrenal and Gonadal Products on the Weight and Radioiodine Uptake of the Thyroid Gland in the Rat, J. Clin. Endocrinol. **10**:1282, 1950.
24. Hardy, J. D.; Riegel, C., and Erisman, E. P.: Experience with Protein-Bound Iodine (PBI); Effect of ACTH and Cortisone on Thyroid Function, Am. J. Med. Sc. **220**: 290, 1950.
25. Wolfson, W. O.; Beierwaltes, W. H.; Robinson, W. D.; Duff, I. F.; James, J. R.; Knorpp, C. T., and Eya, M.: Corticogenic Hypothyroidism: Its Regular Occurrence and Clinical Significance during Prolonged Therapeutic Administration of ACTH or Cortisone, J. Lab. & Clin. Med. **36**:1005, 1950.
26. Lerman, J.: The Thyroid in Gynecology. In Meigs, J. V., and Sturgis, S. H.: Progress in Gynecology, New York. Greene and Stratton, vol. 2, p. 253, 1950.
27. Goldsmith, R. E.; Sturgis, S. H.; Lerman, J., and Stanbury, J. B.: The Menstrual Pattern in Thyriod Disease, in Press.
28. Heinemann, M., Johnson, C. E., and Man, E. B.: Serum Precipitable Iodine Concentrations During Pregnancy, J. Clin. Investigation **27**:91, 1948.
29. Chapman, E. M.; Corner, G. W., Jr.; Robinson, D., and Evans, R. D.: Collection of Radioactive Iodine by Human Fetal Thyroid, J. Clin. Endocrinol. 8:717, 1948.
30. Astwood, E. B.: Treatment of Hyperthyroidism with Thiourea and Thiouracil, J. A. M. A. **122**:78, 1943.
31. Bielschowsky, F.: Tumors of Thyroid Produced by 2-

acetyl-aminofluorene and allyl-thiourea, Brit. J. Exper. Path. 25: 90, 1944.
32. Hertz, S.; Roberts, A., and Evans, R. D.: Radioactive Iodine as an Indicator in the Study of Thyroid Physiology, Proc. Soc. Exper. Biol. Med. 38:510, 1938; Application of Radioactive Iodine in Therapy of Graves' Disease, J. Clin. Investigation 21:624, 1942.
33. Dobyns, B. M.; Vickery, A. L.; Maloof, F.; Cope, O., and Chapman, E. M.: The Effect of Radioactive Iodine on the Function and Histology of the Human Thyroid, in press.
34. Maloof, F.; Dobyns, B. M., and Vickery, A. L.: The Effects of Various Doses of Radioactive Iodine on the Function and Structure of the Thyroid of the Rat, in press.
35. Goldberg, R. C., and Chaikoff, I. L.: Induction of Thyroid Cancer in the Rat by Radioactive Iodine, Arch. Path. 53:22, 1952.
36. Dobyns, B. M., and Maloof, F.: The Study and Treatment of 119 Cases of Carcinoma of the Thyroid with Radioactive Iodine, J. Clin. Endocrinol. 11:1323, 1951.
37. Rawson, R. W.; Rall, J. E., and Peacock, W.: Limitations and Indications in the Treatment of Cancer of the Thyroid with Radioactive Iodine, J Clin. Endocrinol. 11: 1128, 1951.
38. Means, J. H.: 1. The Thyroid Hormone; Certain Aspects of its Elaboration in the Body, the Significance of its Structure and of its Action on End Organs. 2. The Use of Hormones, Drugs and Radiations in the Management of Thyroid Diseases, Bull. Johns Hopkins Hosp. 89:90, 1951.
39. Statland, H.; Wasserman, M. M., and Vickery, A. L.: Struma Lymphomatosa. Review of Fifty-one Cases with a Discussion of the Endocrinologic Aspects, Arch. Int. Med. 88:659, 1951.

Reader's Review

Kidney Injury:

Renal injury studied at Johns Hopkins Hospital in past eighteen years. Importance stressed of accurately determining the lesion. Only thus can proper treatment be carried out. If excretory urograms are inconclusive, retrograde studies should be performed promptly. Early surgical intervention in major critical injuries necessary to avoid subsequent morbidity. Nonsurgical treatment only for minor injuries. *Renal Trauma: A Study of 71 Cases,* J. Urol., November, 1951.

My experience with three nephrectomies—complete rupture of kidneys—during past two and a half months prompts me to add—Amen. Robert B. Bristow, M.D., Urology, *St. Joseph.*

Painful Shoulder:

Controlled study of x-ray therapy on thirty-eight patients with peritendinitis of shoulder. Twenty-one patients treated with x-ray, and seventeen served as controls. Both groups subjected to same procedure, control cases selected at random. In control series, 5 mm. lead shutter prevented any radiation from escaping outside the tube housing. Average calcification approximately same. Results indicate a high percentage improve rapidly regardless of form of treatment. X-ray therapy cannot be credited with shortening period of disability of course. Author concluded calcifying tendinitis of shoulder essentially a self-limiting disease. *Calcifying Tendinitis of Shoulder. Critical Study of Value of X-ray Therapy,* Henry P. Plenk, Radiology, September, 1952.

In spite of several obvious shortcoming, such as small number of patients, I am inclined to agree with him in general. My past experience with procaine injections, not necessarily over area of calcification or pain (and not limited to shoulder pain) but over areas of point tenderness which may be more distant or multiple, have been most gratifying with dramatic and immediate results. I'm convinced that we should treat the primary focus point-tenderness rather than secondary area of referred pain or calcification or both. For excellent reading I would suggest "The Myofascial Genesis of Pain," Janet Travell and Seymour H. Rinzler, Postgraduate Medicine, May, 1952. Sam T. Ellis, M.D., Radiology, *Hannibal.*

Clinical Goldblatt Kidney:

Several hundred alleged cases of hypertension due to unilateral kidney disease reviewed. Twenty accepted as fulfilling criteria of severe hypertension with return to normal levels persisting for at least a year after surgery. Excised kidneys demonstrated either infection or vascular occlusion. Histories disclosed hypertension was abrupt in onset, severe in intensity and clinically of accelerated or malignant type with high percentage of elevated diastolic levels, headaches, convulsions and advanced retinopathy. *Clinical Characteristics of Hypertension With Unilateral Renal Disease,* Perena et al. Circulation, October, 1952.

Mechanism with this type of hypertension may differ from those related to certain chronic bilateral renal disorders and to hypertensive vascular disease, perhaps in direct elaboration of a pressor substance without compensatory mechanism. In case of sudden onset of striking elevation of diastolic blood pressure in those previously normotensive, one should be aware of possibility of unilateral renal insult. Allen J. Herman, M.D., Internal Medicine, *St. Joseph.*

Isotopes in Advanced Carcinoma:

A promising method presented in treatment of prostatic carcinoma. Through a retropubic approach the prostatic mass is determined and a calibrated dosage of radio-active colloidal gold is injected with a spinal needle through the bladder wall throughout the gland. The isotope has both beta and gamma rays so that the gamma rays may penetrate any tissue slightly missed. *The Use of Radioactive Colloidal Gold in the Treatment of Carcinoma of the Prostate,* H. B. Elkins, M.D., Iowa City, presented at 53rd Annual Meeting, American Roentgen Ray Society.

Though it is still somewhat early to give a full evaluation of this treatment, I believe the early reports are promising. Only one operation is required and many who are not candidates for radical surgery may now be helped. Francis T. H'Doubler, Jr., M.D., Surgery, *Springfield.*

Case Report

ESOPHAGEAL LEIOMYOMAS: SURGICAL TREATMENT

A REVIEW AND CASE REPORT

HARRISON H. SHOULDERS, JR., M.D.
ST. LOUIS

THE RECENT SURGICAL literature contains an ever increasing number of case reports of benign tumors of the esophagus. This is true also of the stomach and undoubtedly is a reflection of the increased frequency in the utilization of radiographic methods for examining individuals with even the most minor gastrointestinal complaints. The manifestations of leiomyomata of the esophagus are varied and demand different modes of attack. Experience as demonstrated in the literature, which is in general confined to individual case reports, is agreed in certain particular points in the differential diagnosis and treatment of these lesions.

Most papers indicate that the age of greatest incidence lies in the seventh decade. On the other hand, the reported cases treated surgically have all fallen below the age of 60.

Analyses of these surgical series as well as of cases gleaned from autopsy series gives evidence that the leiomyomata are more frequently found in the lower third of the esophagus and the area of next greatest frequency is the middle third. Furthermore, those tumors in the lower third have most often been of greater bulk than those in the middle third.

These lesions in the lower third have had diverse physical characteristics. The greatest part of these presented themselves as incidental findings on routine chest x-ray. Some have been found in association with hiatus hernia and its concomitant symptoms. Some embrace the entire circumference of the esophagus for a distance up to from 7 to 10 centimeters and others assume such size as to involve directly the wall of the stomach as well as the lower esophagus. In these there has been some question as to the true site of origin of the tumor. An occasional case has been found in association with an esophageal diverticulum, and a few tumors located just at the cardia give rise to an achalasia-like syndrome.

The reported lesions of the middle third of the esophagus have not assumed a size greater than 7 centimeters in diameter. They usually produce no change in the routine chest views; result in a vague picture of "throat filling-up," fullness in the chest on ingestion, substernal burning pains, the occasional catching of "food or pills," and, in one instance, of complete obstruction. In general, such symptoms have been present for a period of years prior to surgical exploration. One gains the impression, also, that such tumors, in pressing upon the bronchial tree, may cause spasmodic respiratory symptoms.

The growth characteristics of these tumors are such that the tumor presents itself as an outgrowth from the esophagus with minimal signs of encroachment upon the esophageal lumen. Only one or two instances of erosion of the esophageal mucosa have been reported. It is evident, then, that patients with these intramural leiomyomata present a different clinical history than those that are found within the esophagus attached by a thin stalk. The latter have been designated as extramucosal and within this group are the bulk of cystic tumors, lipomata, myxomata and similar benign lesions.

The radiologic appearance of these tumors in the esophagogram has been at times confusing, particularly in the lower third where associated structural abnormalities distort the picture. In the middle third the great majority of these tumors, though the total reported numbers about ten, presents a smooth rounded contour with an acute angle at the juncture of the tumor and normal esophagus. The mucosa is intact. Unless the tumor outlined can be seen to move with the esophagus and unless the sharp angulation mentioned is present, the differentiation from an extrinsic mass of whatever cause may be impossible. The radiographs reported in the literature have a similar appearance in most instances.

On esophagoscopy the most commonly mentioned findings are the presence of intact mucosa and an abnormal bend in its course without pulsation. In several studies the inadvisability of performing a biopsy has been pointed out, unless some specific indication such as an ulceration, however mild, exists. By injuring the intact mucosa it is said that the hazard of removing the tumor is thereby increased. In contradistinction to the middle third lesions the larger lower third tumors and especially those of the cardia more frequently are ulcerated and may require biopsies.

The operative experience with these tumors indicates that in the lower third of the esophagus resection of the upper stomach and lower esophagus has been necessary in cases in which the tumor has reached large size. The correct gross diagnosis could be made by the smooth, sometimes lobulated, contour, its rubbery or hard consistency, the absence of direct mucosal invasion and of local metastases. The occasional tumor in this area has been shelled out successfully. In one instance the resection of a wedge of a esophageal mucosa was performed.

The tumors of the middle third, on the other hand, have in almost all instances been shelled out without injury to the mucosa except when previous biopsy had been attempted. Such was the

St. Lukes Hospital, Department of Surgery, St. Louis.

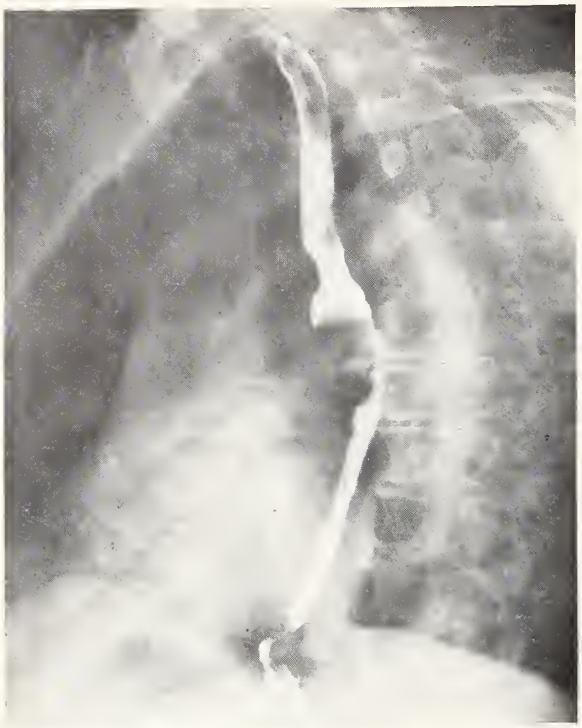


Fig. 1. Oblique view of chest showing the sharply demarcated tumor invaginating the mucosa inward causing the acute angle at the superior margin of the tumor.

manner of handling the case herein reported. In the upper third such tumors are infrequent and have been managed through a cervical incision. The approach generally used for the middle and lower third tumor has been the left thoracotomy incision, with the combined thoraco-abdominal

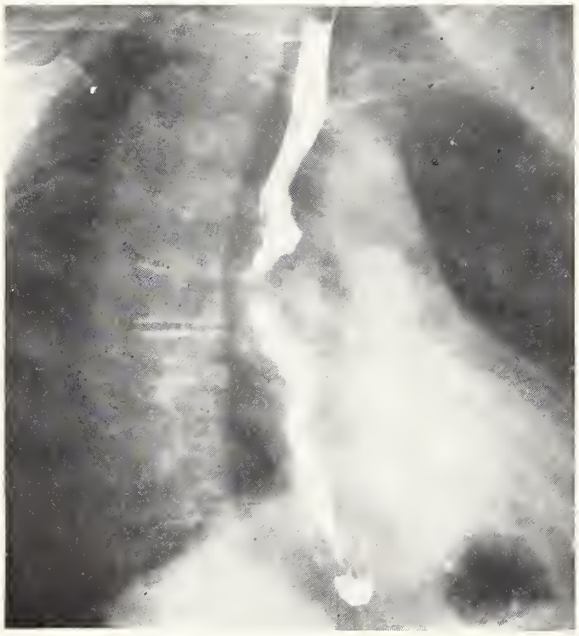


Fig. 2. Showing the normal mucosal folds at the level of the tumor.

incision for the larger ones. Some have preferred the right thoracotomy for lesions which seem to present from the right side of the esophagus, especially in the middle third. Because the nature of the tumor is almost always in question prior to thoracotomy, and because a more thorough exploration and determination of the true extent of the tumor can be made, it is generally felt that the left thoracotomy is the more acceptable.

CASE REPORT

A 70 year old retired streetcar conductor was referred to the surgical service of St. Luke's Hospital, St. Louis, on July 9, 1952, because of the recent finding of a esophageal deformity on x-ray examination. For about two years he had noticed a persistent sensation of fullness in the midchest after the ingestion of food, and delayed passage of food. There was no regurgitation. The symptoms did not increase or abate until about two weeks prior to admission when he was advised to take some pills for pain in his back. He found that these stuck and this caused him some alarm, whereupon he sought further attention and the esophagogram was taken. He had no loss of weight, no cough or hoarseness. He told of two bouts of dyspnea in the last five years and of an old history of

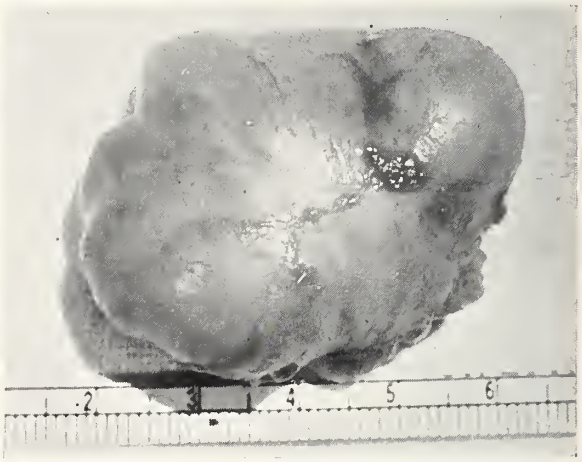


Fig. 3. Demonstrating the uncut tumor.

asthmatic attacks. For ten years he had mild symptoms of prostatism.

About eleven years previously, he reported a brief attack of right upper quadrant pain for which he was not given any specific therapy. This did not recur. In the few months prior to admission, he noticed dyspnea on exertion and pedal edema. No other gastrointestinal symptoms were noticed. On admission the blood pressure was 165/100, pulse 70. The patient was in good physical condition; he was well nourished and well hydrated. He was experiencing no pain or respiratory symptoms when examined and he took a full diet without difficulty. Aside from the signs of generalized arteriosclerosis, no abnormalities were found. Heart, lungs and abdomen were within normal limits. The prostate was enlarged but considered benign. There was no pedal edema and the distal pulses were strong. The chest plates, electrocardiogram and nonprotein nitrogen were considered within normal lim-

its. A film of the pelvis and lumbar spine showed only osteoarthritis.

The esophagogram is depicted. It demonstrates a sharply circumscribed indentation in the anterior wall of the esophagus in its middle third. Where the mucosa is visualized opposite the defect, it is normal.

On esophagoscopy the scope met a sharp angulation to the right just below the aortic arch. This area was easily passed and the cardia visualized. No ulceration or other mucosal defect was to be seen. A presumptive diagnosis of benign intramural tumor of the esophagus, probably a leiomyoma, was made.

On July 12, 1952, a left thoracotomy was performed and the seventh rib resected. A number of pleural adhesions were freed and the lung retracted anteriorly. There was no free fluid and no gross evidence of tumor up to that point. The mediastinal pleura was opened, the lower esophagus isolated and dissected toward the aortic arch.

Immediately inferior to the arch a movable tumor

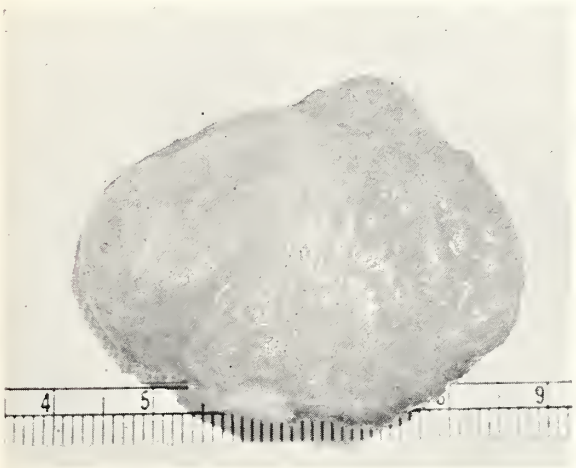


Fig. 4. The cut tumor.

was encountered and freed. A Levine tube was introduced and by doing so the esophageal lumen was found to be posterior to the tumor which obviously was intramural. It was whitish and firm, well circumscribed and bands of muscle fiber could be seen overlying it. A longitudinal incision was made through the musculature and the tumor shelled out. The mucosa was not penetrated and the muscle layers were brought together with a single row of fine silk sutures.

The chest was closed using a posterolateral thoracotomy tube for drainage, and the mediastinal pleura was left open. The patient tolerated the procedure nicely, receiving 1,000 cc. of whole blood during this period.

A liquid diet was begun in twenty-four hours and the thoracotomy tube removed in forty-eight hours. He developed auricular fibrillation on the fourth postoperative day which was converted to a normal rhythm with digitalis and quinidine. Otherwise his course was uneventful. An esophagogram taken on the tenth postoperative day revealed no esophageal abnormality.

The tumor was quite firm, well encapsulated, light yellow in color and it bulged from the surface on cut section. It measured 5 centimeters in its greatest diameter. The pathologic report was that of leiomyoma with thin parallel myelogenous fibers presenting a uniform picture. No evidence of malignancy was present.

SUMMARY

A review of the surgical treatment of esophageal leiomyomata is presented together with an additional case of leiomyoma found in the middle third of the esophagus and treated by "shelling out" procedure.

BIBLIOGRAPHY

1. Rose, J. D.: Myomata of the Esophagus, Brit. J. Surg. **24**:297, 1936.
2. Schatzki, R., and Hawes, L. E.: Roentgenologic Appearance of Extramucosal Tumors of the Esophagus, Am. J. Roentgenol. **48**:1-15, 1942.
3. Harrington, S. W., and Moersch, H. J.: Surgical Treatment of Clinical Manifestations of Benign Tumors of the Esophagus, J. Thorac. Surg. **13**:394, 1944.
4. Harper, R. A. K., and Tisceno, E.: Benign Tumors of the Esophagus and Its Differential Diagnosis, Brit. J. Radiol. **18**:99, 1945.
5. Calmenson, M., and Clagett, O. T.: Surgical Removal of Leiomyomas of the Esophagus, Am. J. Surg. **72**:745, 1946.
6. Schafer, P. W., and Kittle, C. F.: Esophageal Leiomyoma, J.A.M.A. **133**:1202, 1947.
7. Sweet, R. H.: Care of Leiomyomas of Esophagus, New England J. Med. **236**:955, 1947.
8. Dugan, U. J., and Meagher, T.: Esophageal Leiomyomas, Arch. Surg. **61**:1066, 1950.
9. Daniel, R. A., and Williams, R. B.: Leiomyoma of the Esophagus, J. Thorac. Surg. **19**:800, 1950.
10. Cornell, N. W.; Shehadi, W. H., and Shamoff, J. G.: Leiomyoma of the Esophagus, Surg. **28**:881, 1950.
11. Gaslick, W. L., and Stegmaier, J. G.: Benign Tumors of the Esophagus, Surgery **29**:109, 1951.
12. Myers, R. T., and Bradshaw, H. H.: Benign Intramural Tumors and Cysts of the Esophagus, J. Thorac. Surg. **21**: 470, 1951.
13. Case Reports, New England J. Med. **246**:1015, 1952.
14. Hurwitz, A.: Esophageal Leiomyoma, Surgery **25**:304, 1949.

ULCERS: THREE TIMES PERFORATED

ROBERT W. SMITH, M.D.
MARCELINE
AND
PAUL T. BERRY, M.D.
MARCELINE

At a recent medical meeting several good discussions concerning the management of the ulcer patient were heard. There was slight disagreement among the physicians participating in this discussion concerning conservative management of the uncomplicated case. There was decided difference of opinion regarding surgical handling of more difficult cases. It appears to us that the ulcer patient must be treated first in accordance with the severity and persistence of his symptoms. Then, as the emergency complications arise, each must be dealt with separately. Every available facility, including laboratory, x-ray and the diagnostic and technical ability of the physician must be utilized to the fullest extent so that the proper diagnosis can be made and the necessary therapy instituted.

We wish to present a case which we feel is unusual and which still presents a problem as far as the patient is concerned. We feel also that a lesson is to be learned which defies at least one of the cardinal principles of good surgical judgment, namely, surgery in the face of intense shock.

CASE REPORT

Mr. F. walked with help into our emergency room on September 28, 1952, at about 2:30 p.m. He was pale, profusely sweaty, cold and clammy. His complaint was pain in the left abdomen above and below the umbilicus of two hours duration, with pain in the left upper chest, shoulder and left arm. The onset of the pain had been sudden. There was no nausea or vomiting.

An upright flat plate was ordered but cancelled because the patient's blood pressure was 68/0, his pulse 128 per minute, regular but of poor quality. The patient became comatose on the examining table. The abdomen was rigid without rebound tenderness or distention.

Mr. F. was put to bed and oxygen and glucose started. Adrenal cortex and morphine were administered. Laboratory examinations were made which revealed the following: red blood cells, 4,980,000; Hb., 100 per cent; white blood cells, 12,800; polymorphonuclears, 85 per cent; lymphocytes, 15 per cent; hematocrit, 38; sugar, 125; nonprotein nitrogen, 50.8.

After from three to four hours the patient began to respond to therapy and his color improved, but he remained in profound shock with a pulse between 120 and 140 and a blood pressure of 54/0. His urinary output was practically nil. Despite the use of blood, parenteral fluids and general supportive care, his condition remained the same throughout the night. His profound shock persisted. The pain in his abdomen and chest was intolerable without opiates.

Previous History.—Mr. F. enjoyed good health until the spring of 1944 when he developed typical ulcer symptoms. He was told that he had gallbladder disease and was treated. Three months later he had a severe pain in his abdomen, with nausea and vomiting. He was rushed to a hospital for repair of a perforated ulcer. An uneventful recovery was followed a year later with recurrent ulcer symptoms.

In 1949 we repaired a second perforated duodenal ulcer for him. He again recovered.

In 1950, a few months later, he had an obstruction at the pylorus and a gastroenterostomy was done elsewhere.

In 1951 a partial gastric resection was done elsewhere because of the recurrence of the pain, nausea and vomiting. Since that time he has been well up until about a week prior to this hospitalization when he noted episodes of intermittent discomfort in his epigastrium.

The Decision.—After all measures to combat the patient's extreme shock had been unsuccessfully employed, we mustered the courage to do a laparotomy. A small amount of pentothal and local was used for our anesthesia

The patient's shock was alleviated shortly after opening the abdomen. The blood pressure rose from 50/0 to 120/70 before the operation was finished.

Findings of Surgery.—The abdomen was filled with 1,500 cc. of stomach contents. The perforation was found at the suture line junction of the resection. The perforation was about 1 by 2½ cm. with gangrene of the surrounding stomach wall but not the small bowel. The perforation was closed with difficulty and he has made a relatively uneventful recovery.

DILEMMA AND PROGNOSIS

The dilemma which confronted us was first the differential diagnosis between cardiac pathology and an acute abdomen. This patient had severe pain in his left chest and left shoulder in addition to pain in his abdomen. He was in shock. His pulse was fast and thready. Certainly a patient with severe acute coronary thrombosis can manifest abdominal pain and rigidity. Next, following definite diagnosis of an acute abdomen, we faced the proposition of operating on a patient who was in extreme shock. That certainly cannot be considered good surgical judgment. And, finally, the proper anesthesia for a patient in this condition is definitely a problem, especially in a small hospital where the services of a well trained anesthetist are unavailable.

The prognosis on this patient, in our opinion, is not favorable for it appears that another perforation is inevitable because of the appearance of the wall of the stomach. Our advice to this patient will be a total resection of the stomach, which we feel should have been done in 1950 instead of the gastroenterostomy.

121 North Kansas St.

Universal Rule

We like to believe in it; we like to live it; we like others to live by it—and we call it the Golden Rule. In many tongues, in many religions, it sounds a message which we can all understand.

For listing the sayings of many great teachers on this subject, we are indebted to Mirza Ahmed Sohrab, a Persian teacher.

Christ: "Whatsoever ye would that men should do to you, do ye even so unto them."

Hindu: "The true rule is to do by the things of others as you do by your own."

Buddah: "One should seek for others the happiness one desires for one's self."

Parsee: "Do as you would be done by."

Confucius: "What you would not wish done to yourself, do not to others."

Mahomet: "Let none of you treat a brother in a way he himself would dislike to be treated." —*Pathfinder.*

On Writing to Be Read

Every repetition, even of a successful experiment, need not be presented in detail. . . . A scientific paper should be as precise as a legal document but it should also be as readable as a good short story. Readers of scientific articles, however conscientious, have difficulty in reading all that they wish. However hard they try, they will have to skim some articles very lightly, and this is one reason why the summary, tables and illustrations must be clear and completely intelligible without the text. Writers who wish to have their work carefully read will do well to learn as much as they can both of the trade and the tricks of popular journalism.—J. W. Howie, M.D., Glascow, Scotland.

from: Kremers-Urban Company
PHARMACEUTICAL CHEMISTS SINCE 1894
BOX 2038 . . MILWAUKEE 1 . . WISCONSIN
K·U
For your prescription
or your office use . . .
. . . more and more good things
for effective therapy are
coming in K·U packages.
ESTRUGENONE
— Estrone U.S.P.
DIETHYLSTILBESTROL
AMINOPHYLLINE
MEPHENESIN
THIAMINE HYDROCHLORIDE
ASCORBIC ACID
SODIUM ASCORBATE
SODIUM FOLATE
VITAMIN B12
MULTAZINE
PROGESTERONE
ACCEPTED
COUNCIL ON
PHARMACY
AND
CHEMISTRY
AMERICAN
MEDICAL ASSOCIATION

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

What to Expect of Missouri Medicine

Any publication, worth its salt, must develop and maintain reader interest; "a waste basket has no eyes." But what will interest **all** the readers? Ah, there's the rub! No two will completely agree on what they like best. If anyone thinks he can always pick a "hit" or a winner, he stands a good chance to make a million in the publishing game. In fact, many publishers have lost their shirts guessing wrong.

Our scientific section will continue under the competent editorship of Raymond Muether, who has brought this phase of our publication up to its present superlative level. Miss Helen Penn will exercise her "know-how" and skill as assistant editor. This writer will give his humble best to dig up articles of a varied nature from members of our Association all over the State. We visualize this journal as MISSOURI MEDICINE, both figuratively and literally.

We invite criticisms, suggestions, advice on what you would like. Your bouquets or brickbats will be accepted with equal objectivity. Some readers may want to write "letters to the editor." Let's have them. This is our State Journal, we trust all readers will assume a possessive attitude, will feel free to compliment or criticize.

Starting in this issue you will find some new features which, we hope, will strike your fancy. Again, we can't bat 100 per cent. Yet if you find one or two little items which stimulate a desire to read MISSOURI MEDICINE more consistently, and a bit more assiduously each month, we will have achieved our purpose. And, if earnest effort, sincere cooperation and reader interest can be developed and maintained, that is our aim.

Let's hear from you. Tell us what you want, and to the best of our ability, that's what to expect in MISSOURI MEDICINE.

VINCENT T. WILLIAMS, M.D.

". . . An Alcoholic Is Not Funny"

Probably the most interesting in the monthly Medical Forum series was held in the auditorium of the St. Louis Medical Society last October. The subject was "Alcoholism." To my knowledge, this was the first public meeting on this topic in Missouri, and its appeal was manifested by an attendance of more than 500 people, few of whom were doctors.

The panel consisted of two internists with a particular interest in the management of alcoholics, a psychiatrist, a minister and a member of Alcoholics Anonymous. After the formal presentation of each of the panel members, there were generous discussions and many questions from the floor. To me, the meeting turned out to be most interesting and significant.

It was interesting because I learned more than a few things about alcoholics and alcoholism. I learned from an A.A. that an alcoholic is not the funny, laugh provoking character of the jokes and the movies, whose drinks have done nothing more harmful than to release his natural bent for comedy and the enactment of side-splitting antics. He is a sick man whose illness is distinguished from other chronic and dangerous diseases only by its psychologic and sociologic implications. He needs help from his family, his friends, his doctor and from the community in which he lives. All of these relationships, of which I had previously entertained some vague notions, were emphasized for me by the speakers and by members of the audience.

The meeting was significant because, as I sat and listened, it was borne in upon me that I was witnessing another example of a great devotion to public service by my colleagues in the medical profession. This is our house, I thought. And these people are our guests. We have invited them to come here to listen to what we might contribute to their problem, and they have come be-

cause perhaps we had something to offer. For alcoholism is a blight that touches too many individuals and families in the nation, in one way or another.

This meeting served to bring out that which we have proclaimed so many times, and which we must continue to point out again and again: that we, the physicians of America, have the public interest at heart. That our skills and our talents, our time and our every effort are dedicated to the solution of the problems of public health. What other group in these United States meets with the public for mutual consultation and assistance, without thought of reward, other than the restoration to health of the sick and the afflicted?

It was an inspiring meeting. I was proud of the panel, and I was proud of those good people who bared their souls in public, in the hope that they could be of help to other unfortunates.

Jerome I. Simon, M.D.

From Within

In our early Colonial days there were no medical schools in America. Our doctors then were either graduates of European schools or had learned medicine studying and reading under some practitioner. Later medical schools were started in America and our doctors continued to be either medical school graduates or else the product of the apprentice system. One practicing medicine might or might not possess the degree of Doctor of Medicine. There was no definition as to requirements of apprenticeship. The situation was poorly defined and subject to abuses.

This situation was chaotic but out of the chaos came a well ordered plan of licensure and the regulation of the practice of medicine. The desire and impetus for this reform and the recognition of its desirability came entirely from within the ranks of the medical profession and the reform was carried forward by the aggressive efforts of our profession who defined proper laws and brought about proper pressure to have these laws enacted. It all came from within our ranks.

It is an important fact that all our medical reforms have been conceived and carried out from within our ranks. Who but doctors could accurately visualize any medical situation and accurately gauge necessary corrections and design how they should be carried out—a thought to be kept in mind these days.

Francis T. H'Doubler, M.D.

Growth and Dispersion of Cancer of the Cervix

In 202 treated and 154 untreated cases of carcinoma of the cervix, Erle Henriksen (University of Southern California) found the major spread of carcinoma of the cervix to be lymphatic with the major group of nodes involved, in the order of their frequency, paracervical, ureteral, obturator, hypogastric and external iliac. A secondary group includes the common iliac, aortic, sacral and inguinal nodes. At autopsy it was found that carcinoma of the cervix also spread by direct extension or distant metastasis or by both.

In patients receiving recognized therapy 58.5 per cent of the primary and 70 per cent of the secondary nodes were involved. Only 44.7 per cent and 39 per cent respectively were affected in the untreated patients. An accurate interpretation of these differences is difficult. However, possibly local extension was temporarily controlled by treatment, thus permitting time for distant nodal dispersion of the carcinoma.

Direct extension of cervical carcinoma usually follows definite anatomic planes, with the bladder, due to its proximity, the most often invaded. The cul-de-sac of Douglas serves as a barrier, delaying extension to the rectum unless the disease involves the posterior vaginal wall. Lateral extension meets little obstruction, thus parametrial involvement is found frequently.

Incidence of vaginal fistula was 18.8 per cent in treated and 20.1 per cent in untreated patients.

Most patients die of effects referable to the organs and tissues involved by direct extension, i.e., uremia. Extensive lymph node involvement is usually accompanied by extensive continuous spread of the disease. In Henriksen's cases, most patients' radiation therapy had been completed an average of 2.4 years before death.

G. H. Twombly and S. di Palma described the natural history of untreated cervical cancer in 171 cases. Their series showed that 58 per cent of patients died within one year of the onset of symptoms and 82 per cent within two years. Only 4.6 per cent survived five years in untreated invasive cervical carcinoma. Examination of tissues from ninety-one patients who were operated upon showed early metastatic spread to the parametrium in about 50 per cent and to the regional nodes in 16.5 per cent. The most common sites of late metastatic spread are the periaortic or retroperitoneal nodes with the parenchymal organs next in frequency. Occasionally the spine was found to be involved and, rarely, other bones.

The most frequent cause of death in cervical carcinoma is either ureteral obstruction or infection of the urinary tract combined with obstruction. Relief of obstruction by surgery is of doubtful value unless there is some possible attack which might offer a chance of curing the primary tumor.

Joseph L. Fisher, M.D.

Fraternally Yours

Vignettes of the A. M. A. Denver Meeting

DENVER! the golden, glamorous, at the confluence of Cherry Creek and South Platte River. What a complex city; rich in memories and modernity. Most gadgets for ultra living, midst hotels, old and fire-trappish. (And a forty year old ordinance: all construction must be "fire proof.")

But first, the ride out. With Tom O'Brien, our genial, competent State Association Executive Secretary. "Big Bill" Thompson, our State President (he won't mind this *lese majesty,* he's a regular guy), Ray McIntyre, our roving ambassador, and Dr. Allee (of Eldon), one of our favorite medical mentors.

The last time we visited Denver in a model T Ford, along a so called "Trail," at places a mere "alkali" ribbon. But that was in 1918. Now, we "lay me down to sleep" between clean sheets and dream of Lawrence, Scott City, Osawatomie and other towns with a sentient meaning.

So this is Denver? We grab a cab, ride over town. Some streets slicing off at an acute angle, others at 90 degrees. Civic Center trimmings not up to Christmas lighting of Kansas City Plaza, or are they simply not jumping the gun like our eager beavers? The old Muni Auditorium, where the Demo's nominated W. J. ("Crown of Thorns") Bryan, in 1908, like a barnacle stuck onto the new; the gold foil Capitol dome looms up; this "frontier of civilization" has the only Japanese-Buddhist church (now "Community") between Salt Lake City and New York; a "fair-to-middlin" City Park (400 acres); Tabor's Theater, a silver-dollar doodle, which diddled; 25,000 acres of mountains, city owned, named after territorial governor James W. Denver, *circa* 1859; new Coliseum, areadying now for January Stock show and Rodeo.

Strange? Clark, Gruber & Co. put 1 per cent more gold (1860) in "eagles" than U. S., so Uncle Sam bought 'em out in '62. First city with Community Chest idea—one gimmick, one grab, one gift. Most U. S. buildings, save Washington, D. C. One time agitation to move cherry blossom village here; maybe now, with H-bombs, huh?

They breed? Pop increased ('40-'50) around 100 G's . . . smart people . . . 92 per cent natives . . . "like it" out here. Ex-cluz? Coors (of crucible, evaporating dish, lab crockery fame) markets their beer in 11 ounce (vs. regular 12 ounce) bottles.

Top of the Park, take off on Top of the Mark ('Frisco), a plush, glassed-in, carriage-trade feature; Navarre another atmosphere beanery, like Boggio's, 'cross street from Brown Palace, the triangular patch where Henry C. Brown pastured cows. Several other good eateries, probably best steaks at Zietz' Buckhorn, with "half million" in stuffed beasties, ugh!, outside and in; "goodies" at Baur's. Good lookout (320′) top of Daniels & Fisher's Tower. Also can get high at Ship's Tavern (Brown Palace), but dangerous; stewed sheriff plugged radiology resident (for keeps) there a while back.

Denver *Post* (see Fowler's "Timberline"), a Bonfils hangover, good, mildly uninhibited. For an eyeful, see *Rocky Mountain News* (a tab), especially sharp advice for lovelorn, Molly Mayfield; sample headline "Clergy in Stew Over Ad for Brew"; good medical coverage—one edition carried twelve separate stories.

And the meeting: first day (Monday) all about public relations; how to handle patients, a playette on doctors' offices, office-gals and how to "win friends and influence people" among patients; some corking good speeches, presentations. On Tuesday, House of Delegates got going; also scientific show; registration about as expected—7,420 total, 2,612 M.D.'s, thirty-eight from Missouri.

Several Missou doctors on scientific side of things: G. W. Robinson, Kansas City; Howard Rusk, ex-St. Louis; William Kountz, St. Louis; Robert Elman, St. Louis; Rex Diveley, Kansas City; H. R. McCarroll, St. Louis; Brig. Gen. P. I. Robinson, ex-St. Louis; Edwin Gildea, St. Louis, and David Robinson, Kansas City.

Both Gen. P. I. Robinson and Col. John Patton, ex-St. Louis, at Fitzsimons (former the C. O.). Reminds us, first medical officer killed in World War I—Fitzsimons of Kansas City, first medical officer killed in World War II, Panettiere. Both good Missouri boys.

Had a quiet, exclusive hour with Dr. John Travis, "G. P. of the Year"; will detail him later. Also talked to Andy Hall, Olney, Illinois, thrice removed from same throne, mostly about Andy, Jr. (a St. Louis commuter), and Wilford (Maj. Gen.); proud and understandably.

For a comprehensive coverage consult the formal articles in journals. But no one could look-see a meeting without a sense of pride in our profession, in our Missouri group and in the whole American Medical Association. Nor could one find more marvelous colleagues and hosts than those of Denver and the Colorado State group.

V. T. W.

Missouri Medical Meetings

January 11-14: Post Graduate Urological Seminar, South Central Section, Hotel President, Kansas City.
January 22: Missouri Academy of General Practice Area Meetings: Chillicothe, Nevada, Warrensburg, Rolla, Springfield, Columbia, Louisiana, Kennett and Cape Girardeau.
February 12-14: Society of University Surgeons, Park Plaza Hotel, St. Louis.
March 19-21: Tri-State X-Ray Technicians, Hotel President, Kansas City.
March 23-26: American Academy of General Practice, Kiel Auditorium, St. Louis.
March 28-29: Mid-Continent Psychiatric Association, Hotel President, Kansas City.
March 30-April 1: International College of Surgeons, Regional Conference, Statler Hotel, St. Louis.
April 1-4: American Association of Pathologists and Bacteriologists, St. Louis.
April 6-8: Missouri State Nurses Association, Statler Hotel, St. Louis.
April 15-17: Midwest Hospital Association, Municipal Auditorium, Kansas City.
April 19-22: American Radium Society, Chase Hotel, St. Louis.
April 24-25: Missouri Tuberculosis Association, Hotel President, Kansas City.
April 26-29: Missouri State Medical Association Annual Meeting, Municipal Auditorium, Kansas City.
May 4-6: Missouri Public Health Association, Hotel Governor, Jefferson City.
May 11-14: American Urological Association, Jefferson Hotel, St. Louis.
May 25-28: Catholic Hospital Association, Municipal Auditorium, Kansas City.

Component Society Meeting Dates

Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb)—every six weeks.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.

Musings of the Field Secretary

The annual meeting of the Missouri Health Council was held at the Governor Hotel, Jefferson City, on November 12. The morning session consisted of a discussion of "Unmet Medical and Health Needs in Missouri" by the following panel: Miss Frieda Brackebusch, Health and Hospital Division, St. Louis Social Planning Council; Mr. Joy O. Talley, Division of Vocational Rehabilitation, Missouri State Department of Education; Mr. J. P. Stokes, Division of Welfare, State of Missouri; James R. Amos, M.D., Director, Division of Health, State of Missouri. Mr. Arthur Nebel, State Crippled Children's Service, Columbia, served as moderator.

Miss Brackebusch pointed out that increasing numbers who are on public assistance rolls are going into the St. Louis City Infirmary with chronic illnesses. On entering the City Infirmary their public assistance funds are stopped, leaving the full financial load on the city. She also set forth the problems involved relative to the proper handling of mental and tuberculosis cases in Greater St. Louis.

Mr. Talley described the services available to the vocationally handicapped people in the state, which include medical examination, counseling, certain medical and surgical care, job training, furnishing of tools, job placement and follow-up. He stated that 1,113 handicapped Missourians were helped under this program and put in jobs during 1951. The average cost of rehabilitating these individuals amounted to approximately $495 per person. At present there are 2,594 being served by the program.

Mr. Stokes reported that Missouri now has some 426,000 persons who are 65 years of age and older. This state ranks second in the nation in percentage of its citizens in this age bracket. (It looks as though medicine in Missouri is not doing too badly, all sniping to the contrary.) He pointed

out, however, that such a percentage of older people is producing increasing need for more public assistance funds, more aid to the permanently and totally disabled, more nursing homes, more old age pensions.

Dr. Amos discussed, for the most part, the problem of tuberculosis in the state. He explained the difficulties of staffing the tuberculosis hospitals, of tracking down many tuberculosis contacts, of securing the cooperation of the patients and their families and of financing tuberculosis control. The matter of general hospitals throughout the state admitting and caring for tuberculosis patients came under considerable discussion. Apparently a good number of the Council representatives felt that more arrangements should be made to care for tuberculosis patients in general hospitals.

The afternoon program was given over to a report by Dr. C. E. Lively, Director, Department of Rural Sociology, University of Missouri, on the present status of the Health Council's Indigent Medical, Dental and Hospital Care Study in this state. Sufficient funds, all from nonpublic sources, have been secured to make possible the survey basic to this study. The design of the survey is to exclude the six counties of urbanized areas which can well take care of themselves if relieved of the "slip-ins" from without. One hundred nine counties will then be under consideration. It is anticipated that fifty of these will be sampled in the actual survey. Plans are under way for collection of the survey information to begin by February 1, 1953.

A great part of the success of this study rests with the willingness of practicing doctors over the state to cooperate in furnishing the information on their indigent patients as requested by the survey.

The election of officers terminated the day's program. For better or for worse, the Missouri State Medical Association's Field Secretary was elected to the Council's executive committee for the ensuing year. Mr. Arthur Nevel, Director, State Crippled Children's Service, Columbia, is chairman of the Health Council.

An observation on the panel discussion might well be made: instead of placing too great emphasis on the continual necessity for more public funds to meet the mounting needs of public health and welfare in Missouri, why not emphasize ways and means of effecting mutual aid between the many sound health and welfare voluntary organizations and the public agencies for meeting some of these problems?

Poliomyelitis made history in 1952 and so did the National Foundation for Infantile Paralysis. The worst epidemic of all time was met and contained. The March of Dimes furnished the bulk of the funds in this battle. Some 1,100 Missourians were afflicted in 1952 and 80 per cent of these patients required and received March of Dimes assistance. Every Missourian can share in this fight by assisting in the 1953 March of Dimes, January 2-31. Missouri counties will be called upon to provide continuing medical care for more than 1,000 poliomyelitis patients from 1952 and previous years; this in addition to the hundreds of poliomyelitis victims which this state may expect during 1953.

MEMBERS IN THE NEWS

Philip A. Tumulty, M.D., Baltimore Maryland, has been appointed director of the department of internal medicine at St. Louis University, effective next spring, by the Very Reverend Paul C. Reinert, S. J., president of the University. Dr. Tumulty at present is associate professor of medicine and physician at Johns Hopkins Medical Institutions. He succeeds Ralph A. Kinsella, M.D., who has been director of the department since 1924 and who will continue as professor on the school faculty and on the staff of St. Mary's Group of Hospitals.

Ernest Spitzer, M.D., St. Louis, a member of the St. Louis County Medical Society, recently was awarded a renewal of his diploma upon the occasion of the fiftieth anniversary of his graduation from the University of Vienna.

Alphonse McMahon, M.D., St. Louis, was elected president-elect of the Southern Medical Association at the recent annual session. At the same session, St. Louis was chosen as the meeting place in 1954, the session at which Dr. McMahon will preside.

J. R. Bridges, M.D., Kahoka, was one of the honored guests at a community gathering at Revere on October 28 when more than five hundred persons assembled to pay tribute to Dr. J. L. McConnell on his eightieth birthday.

Morning worship service at the Presbyterian church of Lexington on November 2 was dedicated to those engaged in the art of healing, particularly to **C. T. Ryland, M.D., Lexington.**

Everett D. Sugarbaker, M.D., Jefferson City, was reelected president of the Missouri Division of the American Cancer Society at a meeting on November 9.

Herbert R. Booth, M.D., Hamilton, was presented a life membership in the Boutwell-Clark-Craven-Eads Post No. 285 of the American Legion by his comrades of the post at a ceremony on November 19.

PROSPECT and RETROSPECT

OVER the long centuries of time past, men of medicine have stood as guardians of the health of their fellow men.

Out of the stored wisdom and the endless seeking of the years have come new methods, new technics, new plans . . . .

Plans to protect the patient from worry, from anxiety, from financial hazard have been a part of doctors' foresight . . . will meet an ever-increasing need in the future.

BLUE CROSS and BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Saint Louis **Kansas City**

D. Elliott O'Reilly, M.D., St. Louis, addressed the Frisco System Medical Association at Fort Worth, Texas, on "Rehabilitation of Orthopedic Injuries" on October 24.

Guy N. Magness, M.D., University City, has been appointed University City Director of Health.

John F. Rutledge, M.D., Festus, spoke to members of the Young Adult Group of Grace Presbyterian Church, Festus, on November 16, on "Religion and Medicine."

J. F. Harrison, M.D., Mexico, was conferred a 50 year button by the Masonic Hebron Lodge No. 354 A. F. & A. M. at a ceremony in Mexico on November 5.

A revised film list including seventy-eight medical films not readily available from other sources has been announced by the Committee on Medical Motion Pictures of the American Medical Association. A copy may be obtained by addressing the Committee at 535 N. Dearborn St., Chicago 10, Ill.

NEW MEMBERS

Andreassen, Dimil F., M.D., Sullivan.
Arst, Daniel B., M.D., Bloomfield.
Good, James T., M.D., Springfield.
Johnson, John J., M.D., Neosho.
Standley, Eugene T., M.D., Portsmouth, Va.

IN MEMORIAM

Trimble, William K., M.D., Kansas City, a graduate of the Kansas City Medical College, 1900; honor member of the Jackson County Medical Society; retired; aged 78; died October 3.

Herington, Warner, M.D., Green City, a graduate of St. Louis University School of Medicine, 1903; honor member of the North Central Counties Medical Society; aged 81; died November 4.

Leighton, William E., M.D., St. Louis, a graduate of Harvard Medical School, 1900; honor member of the St. Louis Medical Society; aged 80; died November 9.

Miloslavich, Edward L., M.D., St. Louis, a graduate of the Medizinische Fakultat der Universitat, Wien, Austria, 1908; member of the St. Louis Medical Society; aged 68; died November 11.

Brown, Arthur C. F., M.D., Richmond Heights, a graduate of Barnes Medical College, 1901; honor member of the St. Louis Medical Society; retired; aged 83; died November 14.

Edwards, Edwin D., M.D., St. Louis, a graduate of Barnes Medical College, 1910; honor member of the

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex Wednesday, 1-3 P. M.) Telephone—Central 6-1162

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
HOMER V. CAPPARELL, M.D.
LEROY E. BOSTIAN, M.D.

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

St. Louis Medical Society; retired; aged 70; died November 14.

Epperly, R. G., M.D., Huntsville, a graduate of Missouri Medical College, 1894; honor member of the Chariton-Macon-Monroe-Randolph County Medical Society; retired; aged 85; died November 14.

Dickson, James A., M.D., St. Louis, a graduate of Washington University School of Medicine, 1881; honor member of the St. Louis Medical Society; retired; aged 92; died November 27.

COUNCILOR DISTRICT NEWS

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

On Thursday afternoon and evening, November 12, at the Strand Hotel, Chillicothe, the First Councilor District met and enjoyed a practical and instructive scientific program spiced with a social hour and plenty to eat. Thirty-eight physicians were in attendance.

The afternoon program was as follows: **George V. Herrman**, M.D., Kansas City, "Drug Therapy in Infants and Children"; **Fred H. Lundgren, Jr.**, M.D., Kansas City, "Nephritis," and **Joseph C. Williams**, M.D., Kansas City, "Chronic Vaginitis and Cervicitis."

In the evening the following program was presented: **William J. Shaw**, M.D., Fayette, "The Administrative Plan for Medical Civil Defense in Missouri," followed by a panel on "Trauma" presented by the faculty of the University of Kansas Medical School: "Shock; Altered Physiology and Treatment," Max I. Miller, M.D.; "Burns; the Open Treatment," **David W. Robinson**, M.D., and "Abdominal and Chest Injuries," **C. Frederick Kittle**, M.D.

The Grand River Medical Society served as host at the meeting.

Donald M. Dowell, M.D., *Councilor.*

Grand River Medical Society

C. S. Gillmor, M.D., Kansas City, spoke at a dinner meeting of the Grand River Medical Society and its Auxiliary at the Strand Hotel, Chillicothe, December 11. He discussed in effective manner "The Management of Arthritis."

During the scientific part of the evening's program, members of the Auxiliary held a separate session with Mrs. Richard Sutter, University City, President, Woman's Auxiliary to the Missouri State Medical Association, and Mrs. C. A. McBurney, Slater, President-elect, with them.

E. A. Duffy, M.D., *Secretary.*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Thirty-six physicians attended an afternoon and evening meeting of the Second Councilor District at the Mark Twain Hotel, Hannibal, on November 6.

Three papers were presented on the afternoon program: **Melvin Roblee**, M.D., St. Louis, "Chronic Vaginitis and Cervicitis"; **C. Read Boles**, M.D., St. Louis, "Drug Therapy in Infants and Children," and **Charles Ross**, M.D., St. Louis, "Nephritis."

Following a short discussion period a social hour was used to properly initiate the dinner.

A panel on "Trauma" was presented by members of the faculty of Washington University Medical School as follows: "Chest Injuries," **Hector Benoit, Jr.**, M.D.; "Burns," **James Chamness**, M.D.; "Fractures and Extremity Injuries," **R. H. Ramsey**, M.D., and "Shock," **Harvey Butcher**, M.D.

The host at this meeting was the Marion-Ralls County Medical Society.

W. F. Francka, M.D., *Councilor.*

FIFTH COUNCILOR DISTRICT

J. L. WASHBURN, VERSAILLES, COUNCILOR

Cole County Medical Society

The Cole County Medical Society met in the staff room of St. Mary's Hospital, Jefferson City, November 18.

Following the disposition of a number of business items, the rest of the program was concerned with a discussion of public relations and society programs. **Mr. T. R. O'Brien** and **Mr. Ray McIntyre** from the Association office, and **Mr. Lemoine Skinner**, Public Relations consultant to the Association, were present to take part in the deliberations. There were twenty-five in attendance.

Robert Tanner, M.D., *Secretary.*

SIXTH COUNCILOR DISTRICT

Pettis County Medical Society

The Pettis County Medical Society held a dinner meeting at the Old Missouri Homestead, Sedalia, November 17, honoring one of their revered members who completed fifty years in the practice of medicine in October. **H. A. Hite**, M.D., Green Ridge, was the recipient of his society's esteem on this pleasant occasion. He was presented a plaque by the Society with appropriate inscription. **A. L. Walter**, M.D., Sedalia, served as toastmaster of the evening. Dr. Hite described a number of interesting incidents during his fifty years of practice. A short talk was given by **Mr. Ray McIntyre**, Field Secretary of the Association. In his remarks he expressed the hope that Dr. Hite be present at the Annual Banquet of the Association during the 1953 Annual Session in Kansas City, April 28, 1953, to receive in person his 50 Year pin.

Carl Siegel, M.D., *Secretary.*

EIGHTH COUNCILOR DISTRICT

W. S. SEWELL, SPRINGFIELD, COUNCILOR

The Eighth Councilor District held an afternoon and evening meeting on November 6 at Wilder's Cafe, Joplin. Some forty-five physicians were in attendance.

The afternoon session offered three discussions as follows: "Nephritis," **Martin P. Hunter**, M.D., Kansas City; "Chronic Vaginitis and Cervicitis," **Robert Lamar**, M.D., Kansas City, and "Drug Therapy in Infants and Children," **Herbert V. Davis**, M.D., Kansas City.

A social hour and dinner preceded the evening program.

Carroll P. Hungate, M.D., Kansas City, moderated the scientific presentation of the evening which included a panel on "Trauma" presented by the faculty

Sgt. 1st Class Einar H. Ingman U. S. Army Medal of Honor

"The sergeant charged alone . . ."

THE REDS IN AMBUSH on the ridge had lain concealed, withholding their fire. Now they opened up. The two squads were trapped. Their leaders were wounded; others were dropping.

Sergeant Ingman took command. He reorganized the survivors, assigned fields of fire, encouraged the men to fight. A red machine gun opened fire. The sergeant charged it alone, hit it with a grenade.

Then he tackled another gun. A grenade and a burst of fire knocked him down, badly wounded. He got up, reached the gun, and dispatched the entire crew. When his squad reached him, they found Sergeant Ingman unconscious—but 100 of the enemy fleeing in panic.

"Bucking the Communists," says Sergeant Ingman, "takes an awful lot of staying power. The G.I.'s have got it. You have, too, when you invest part of your hard-earned pay *regularly* in U. S. Defense Bonds."

Bonds are first of all a cash saving for you. But they're also back of our country's *production power*. Which couples up with G.I. *fire power* to keep the peace for all.

Peace is for the strong! For peace and prosperity save with U.S. Defense Bonds!

Now E Bonds pay 3%! Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semi-annually when held to maturity! Also, all *maturing* E Bonds automatically *go on* earning—at the new rate—for 10 *more* years. Today, start investing in Series E Defense Bonds through the Payroll Savings Plan.

A PUBLIC SERVICE PROJECT · THE ADVERTISING COUNCIL · TENTH ANNIVERSARY

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Upjohn

less-antigenic penicillin:

Cer-O-Cillin

Trademark Reg. U. S. Pat. Off.

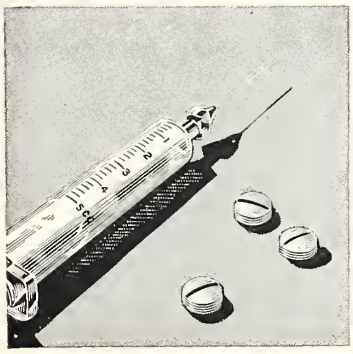
POTASSIUM

Available as:

Sterile vials containing 200,000 units Crystalline Penicillin O Potassium

Bottles of 12 buffered tablets, each containing 100,000 units Crystalline Penicillin O Potassium

The Upjohn Company, Kalamazoo, Michigan



of the University of Kansas Medical School as follows: Ernst March, M.D., "Shock; Altered Physiology and Treatment"; **David W. Robinson**, M.D., "Burns, the Open Treatment," and **William Williamson**, M.D. "Head and Nerve Injuries."

Dr. Hungate discussed briefly the Missouri Administrative plan for Medical Civil Defense.

The Jasper County Medical Society was host on this occasion.

W. S. SEWELL, M.D., *Councilor.*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

South Central Counties Medical Society

The South Central Counties Medical Society met at the Horton Hotel, Willow Springs, on November 19, for dinner, with the following members and visitors present: Drs. **S. W. Connor** and **A. C. Ames**, Mountain Grove; **Garrett Hogg, Jr.**, Cabool; **T. J. Burns** and **S. G. Kramer**, Houston; **M. B. Perkins**, Willow Springs; **T. R. Skaggs**, Mountain View; **E. C. Bohrer** and **Rollin H. Smith**, West Plains; **C. W. Cooper**, Thayer; **Ned White** and **J. G. Siceluff**, Springfield, and the wives of most of them.

After dinner the ladies went home with Mrs. Perkins for the evening and Dr. Connor, the president, called the meeting to order and turned it over to the visitors from Springfield. Dr. White spoke on "The Causes, Prevention and Management of Premature Labor" and Dr. Siceluff spoke on "Some Genito-urinary Troubles in Children" and showed a number of x-ray films of cases. Dr. Connor expressed the thanks of the society.

The minutes of the last meeting were read and approved. A transfer card from Dr. Paul A. Davis, Chicago, who is moving to a farm between Cabool and Willow Springs, was presented and it was voted to let this lay on the table until Dr. Davis could be present in person.

It was voted to place **R. A. Ryan**, M.D., on the honor list.

It was voted to have the same local dues as last year.

The meeting adjourned to meet in Mountain View on December 10, a week earlier than the regular date on account of the nearness of Christmas.

A. C. AMES, M.D., *Secretary.*

Your Patients Read

"Cancer by the Carton," "Why Kids Behave Like Little Children," "What You Should Know About Your Eyes," "Jungle Doctor," and "Cyclone in Calico." *Readers Digest,* December 1952.

"Man Behind the Test," "Flu Fighter," and "The Stubborn Sister." *Time,* December 8, 1952.

"Have We Missed a Cure for Cancer?" December 13, 1952; "Is Your Body in Tune?" December 20, 1952; "The X-Ray Cannon and the Rotating Chair" January 3, 1953; "What We Doctors Must Do to Stay Free" January 17, 1953 (all in *Collier's).*

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

We Go to Press

Joseph H. Printz, M.D., and **O. Jack Printz**, M.D., Kansas City, "Massive Peripheral Nerve Tumor: Report of an Unusual Case," in *The American Surgeon,* November 1952.

Robert Dean Woolsey, M.D.; **George E. Thoma**, M.D., and **Robert E. Mack**, M.D., St. Louis, "Localization of Intracranial Neoplasms with Radioactive Diiodofluorescein," in *Southern Medical Journal,* September 1952.

Franz Leidler, M.D.; **David E. Smith**, M.D., and **Robert D. Woolsey**, M.D., St. Louis, "Intracranial Epidermoic Cyst," in *The American Journal of Clinical Pathology,* September 1951.

Postgraduate Courses

During February and March

RADIOLOGY—3 days, February 16-18

ELECTROCARDIOGRAPHY—6 days, March 9-14

EXFOLIATIVE CYTOLOGIC DIAGNOSIS—2 days, March 16 and 17

APPLIED NEUROLOGY—3 days, March 19-21

METABOLIC DISEASES—2 days, March 23 and 24

MEDICINE OF THE AGING (GERIATRICS)—3 days, March 25-27

Each of these courses is presented by guest instructors of outstanding national reputation, in addition to members of the University of Kansas faculty.

For program announcements and information, write:

Extension Program in Medicine

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE

Kansas City 12, Kansas

Your Laboratories . . .
Our Responsibility

Duncan
Laboratories
Established 1921

KANSAS CITY, MO.,
909 Argyle Bldg.

JOPLIN, MO., *230 Frisco Bldg.*

Associated
Laboratories

INDEPENDENCE, MO.
Physicians Laboratory
First National Bank Bldg.

LEXINGTON, MO.
Lexington Memorial Hospital

SEDALIA, MO.
Bothwell Memorial Hospital

WARRENSBURG, MO.
Warrensburg Medical Center

Curbstone Consultation

DIAGNOSIS AND TREATMENT OF CANCER OF THE UTERUS

The following recommendations of the Subcommittee on Exfoliative Cytology were adopted by the Medical and Scientific Committee of the American Cancer Society on June 3, 1952, for dissemination to the medical profession:

1. No surgeon should operate for cancer of the uterus without biopsy confirmation.

2. Patients with positive vaginal smears should be thoroughly investigated. Upon completion of this study adequate treatment should be instituted.

Pathologically Speaking

SEDIMENTATION RATE

The rate of settling or sedimentation of the red blood cells in whole blood which is mixed with an anticoagulant is known as the sedimentation rate.

Increased settling of red cells in disease has been appreciated for some time. Use of this phenomenon as a laboratory aid in clinical diagnosis is well established.

The exact nature of the underlying factors involved in the settling of red cells in disease is apparently related to alterations in plasma proteins and perhaps cholesterol. The total number and form of red cells are important factors.

The methods for measuring sedimentation rates are of two main types: (1) the time is fixed, and the extent of sedimentation during that period is recorded; (2) the distance of fall is fixed, and the time required to reach that distance is registered. Normal range will depend upon the method used.

The technical features of the test, regardless of method used, also vary according to (1) height of tube, (2) diameter of tube, (3) position of tube, (4) type of anticoagulant. The test should be done on a fasting specimen at room temperature and within one hour of obtaining the sample.

One method includes estimation of packed cell volume so that the sedimentation rate can be "corrected" in relation to any degree of anemia or other red cell discrepancy which may be present.

The sedimentation rate is rapid in diseases in which tissue destruction is taking place; this may be due to the inflammatory or degenerative processes which occur in tumors.

Diseases such as rheumatic fever, pulmonary tuberculosis, gout, rheumatoid arthritis, and most acute pyogenic diseases give rapid sedimentation rates. Acute myocardial infarction also will produce elevation of the sedimentation rate, and the procedure is of great value in following the course of this disease in regards to the stages of healing and the activity to be allowed.

Frequently, when the physician is faced with a diagnostic problem in which it is difficult to establish an organic or a psychosomatic basis in the case, the sedimentation rate, if elevated, will caution him to study the patient again minutely for evidence of organic disease. But it must always be remembered that a normal rate of red cell sedimentation does not necessarily mean an absence of disease.

RALPH EMERSON DUNCAN, M. D.
LORAINE E. SCHULTZ, M. D.
ALBERT E. UPSHER, M. D.

Sex and the Modern Medicine

Robert Lamar, M.D.

Once in a while, as we are in the act of filing the current medical journal in the under-the-desk repository for the morning mail's influx of samples of aural, nasal, rectal and scalp detergents, our eye is caught by a slight change in the magazine's format and our curiosity is aroused sufficiently to inspire a brief investigation, possibly even a quick perusal of the contents (if only to see if they might have started running cartoons). Such changes are usually due to a new and eager editor who recognizes that even a pediatrician could theoretically become interested in a journal properly presented. The above title, for example, while having nothing to do with the text, makes certain that you will read this article first.

Always, however, these changes are too feeble and too few. This, of course, leads to the paradox of a magazine which is no more interesting but only slightly less dull. Such seems to be the fate of all our professional publications and all need a literary infusion of teeth, toupees, and testosterone. When a specialist (the medical equivalent of the man who waits forty-five minutes for a three-minute car wash) refers, for example, to his organ of expression as "the grey journal," he is subconsciously implying its soporificity as well as its color. How much better "the purple journal with yellow spots!"

It is with this in mind that we plead for a radical change in both layout and writing of contemporary medical literature. A glance at the drug-store book shelves clearly reveals modern publishing concepts. What has Mickey Spillane got that we ain't?

As an illustration, let us consider a typical medical article as it could be published with the modern embellishments intended to make it sell. The subject, chosen at random—by an obstetrician—will be "A Collected Series of Term Deliveries With Unruptured Amniotic Membranes." Since this will be the lead article, the journal's cover should reflect the subject matter. Why not, then, a bent forcep-blade on a background of somber meconium with a half-tone, off center, of a screaming, scopolaminized redhead?

Such a cover would entice thousands of practitioners whose nearest approach to medical literature heretofore has been to see if their name is spelled right in the medical directory.

And the title? Naturally we'll print, in large dripping letters:

CAUL GIRL

Let's join the march of progress and in a short time Hollywood will be clamoring for rights to our medical literary efforts. When medical writers, and consequently their audience, wake up, we might just possibly even learn something. For the pattern is clear. Don't just swear by Apollo. Swear!

Yesterday, Today and Tomorrow

There are two days in every week about which we should not worry—two days which should be kept free from fear and apprehension.

One of these days is yesterday with its mistakes and cares, its aches and pains, its faults and blunders. Yesterday has passed forever beyond our control.

All the money in the world cannot bring back yesterday. We cannot undo a single act we performed; we cannot erase a single word we said. Yesterday is gone.

The other day we should not worry about is tomorrow with its possible adversities, its burdens, its large promise and poor performance. Tomorrow also is beyond our immediate control.

Tomorrow's sun will rise either in splendor or behind a mask of clouds—but it will rise. Until it does, we have no stake in tomorrow, for it is as yet unborn.

That leaves only one day—today. Any man can fight the battles of just one day. It is only when you and I add the burdens of those two awful eternities—yesterday and tomorrow—that we break down.

It is not the experience of today that drives men mad—it is remorse or bitterness for something which happened yesterday and the dread of what tomorrow will bring. Let us, therefore, journey but one day at a time.—*Illinois Medical Journal.*

Five M.D.'s Assured House Seats; Rep. Wood's Race in Doubt

Of the six physicians up for reelection or election to the House, five won their contests and, at this writing, the sixth race is so close a recount may be required. Dr. John T. Wood (R), seeking reelection in the first Idaho district, was trailing his Democratic opponent, Mrs. Grace Pfost, by a few hundred votes on the complete but unofficial count. Reelected were Drs. Walter H. Judd (R) of Minnesota, A. L. Miller (R) of Nebraska and I. D. Fenton (R) and T. E. Morgan (D) of Pennsylvania. A physician newcomer to the House is Will E. Neal (R), elected in West Virginia. Dr. E. H. Hedrick of West Virginia (D) retired from the House to run unsuccessfully for governor.—F. E. Wilson, M.D., *Capitol Clinic.*

Intravenous Angiography

In spite of care and experience, we still find the making of aortograms a rather major undertaking. We have reserved it for the urologic diagnostic problem which cannot be solved by other means. We do not know yet the place of this relatively simple technic in the work-up of the patient, but it may be used more frequently in the diagnostic problem for which ordinary intravenous urography is inadequate and as a valuable supplement to retrograde pyelography.—Frank Hinman, Jr., M.D.

rapid response in the pneumonias

Pneumococcal, viral, and other pneumonias due to sensitive organisms respond promptly to therapy with well-tolerated **Terramycin**

Pfizer

New Drugs, New Faces, New Instruments

A recent addition to the staff of the Medical Division of The Upjohn Company, Kalamazoo, Michigan, is Robert W. Heinle, M.D. Dr. Heinle, a graduate of Western Reserve University, interned at the University Hospitals of Cleveland and has been on the staff of Boston City Hospital, Harvard Medical School, Cleveland University Hospitals and, most recently, Associate Professor of Medicine at Western Reserve. He is a recognized authority on hematology and has been assigned to Upjohn's department of clinical investigation, concerned chiefly with studies in nutrition. He is a member of many medical societies and associations and serves on several advisory and editorial boards. Dr. Heinle is certified by the American Board of Internal Medicine.

Ray Steffel, a native St. Louisian, is well known to many physicians in that section where he represents the Bilhuber-Knoll Corp. Just recently, John Farbarik, who hails from Pittsburgh, Pa., has joined this company and assumed the responsibilities for the Kansas City area. Both men are busily engaged in helping the physicians keep posted on "what's cookin" and at present it is the use of Metrazol orally for the mentally confused, senile patient with or without cerebral arteriosclerosis.

Mr. R. H. Robertson, Division Manager for The Baker Laboratories, Inc. (manufacturers of Baker's Modified Milk and Varamel), moved to St. Louis from Hamilton, Ohio, about three years ago and now considers himself to be a true Missourian. He says that he feels very much "at home" since being in Missouri, and attributes this feeling to the courtesy and cordiality of the physicians that he has been contacting.

A "new face" will appear in your office soon. It is that of the new format of Physician's Bulletin, published now for twenty-seven years by Eli Lilly and Company. In this attractive and more convenient size the Physician's Bulletin will come to you (and to physicians all over the country) ten times a year, and four times a year to physicians in foreign countries. The editors note that they would appreciate comments and suggestions from their readers.

Our Responsibility

But are we, as doctors, shouldering our responsibilities as citizens in fighting to preserve the basic principles of American Freedom? And are we, in our own profession, taking action to castigate those who by their conduct are defying our high ethical standards and destroying our good public relations?

It is the responsibility of all of us to maintain the ideals with which our profession is so richly endowed.—Robert A. Scarborough, M.D., Presidential Address, American Proctologic Society.

Buy
United States
Savings Bonds

SECLUSION MATERNITY

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.
Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

CLASSIFIED ADS

"BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290."

INDUSTRIAL PHYSICIAN wanted by large manufacturing concern in the Kansas City area. Please state experience, age, salary requirements and other pertinent data. Reply Box 184, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

INDEX TO ADVERTISERS

Abbott Laboratories 13
American Cancer Society 69
Ames Company, Inc. 4
Ar-Ex Cosmetics, Inc. 72
Ayerst, McKenna & Harrison, Ltd. 48

Bayer Company 11
Blue Cross-Blue Shield 59

Chicago Medical Society 72
Ciba Pharmaceutical Products, Inc. 47
Coca-Cola Company 68
Continental Casualty Co. 76
Cook County Graduate School of Medicine 69
Cordelia of Hollywood 74

Duncan Laboratories 65

Fairmount Hospital 77

Hamilton-Schmidt Surgical Co. 72

W. E. Isle Company 77

Keeley Institute 73
Kremers-Urban Company 53

Lederle Laboratories, Inc. ..... Insert
Eli Lilly & Company 18
Luzier's, Inc. 34

Major Clinic 5
Mead Johnson & Company 80
Medical Protective Company 73
Merck & Company, Inc. 79
Milwaukee Sanitarium 60

Neurological Hospital 15
Norbury Sanitarium 77
North Shore Health Resort 70

O'Connell Bros., Inc. 77
Orgo Products 73

Parke, Davis & Company 2, 3
Chas. Pfizer & Company, Inc. 67
Philip Morris & Co. 75
Physicians Casualty Association 70

Ralph Sanitarium 17

Schering Corporation 7
Schieffelin & Co. 78
G. D. Searle & Co. 33

United Insurance Co. 71
U. S. Savings Bond 62, 77
University of Kansas School of Medicine 66
Upjohn Company 63
U. S. Brewers Foundation, Inc. 69

West Texas Maternity Hospital 72
Winthrop-Stearns, Inc. 9
Dorothy Worrell 77

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Curiosa et Trivia

William B. McCunniff, M.D.

Surgical Sideline: In 1877, several months before its first public performance, Brahms' Symphony No. 2 in D Major was played by Dr. Theodore Billroth. He wrote: "That is the pure blue sky, the murmur of springs, the sunshine, the cool green shade!"

Safe bet in any group of doctors: Spell pruritus. No, it is . . . I-T-U-S. Doesn't necessarily imply inflammation!

An edict of Pope Innocent III, in 1209, stated that inflicted wounds must be examined and an opinion given by a medical expert. Similar legislation is currently under consideration in Missouri.

Three statues stand in the Kentucky capitol building: Andrew Jackson, Henry Clay and Dr. Ephraim McDowell, the physician who performed the first successful laparotomy in the United States.

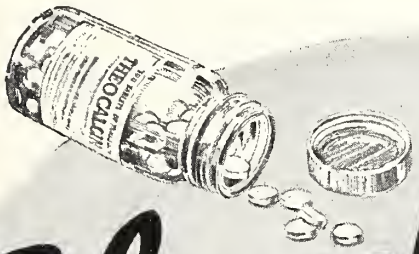
In heavily populated areas, siren volume of 96 decibels bestirs the populace. The level of noise at Madison and State in Chicago is 100 decibels. Or a cushion-shot with a bedpan 4:30 a.m. in any hospital corridor.

A-Bomb town, Los Alamos, has good 110-bed hospital; in case of complications, choice of 14 churches for funeral; but body will have to be embalmed by Santa Fe undertaker and shipped to another hometown for burial.

Metastasis is derived from the Greek implying "taking up one's stand in a different place."

No flowers for patients, no perfume for nurses, in 30 bed hospital in Helsinki, Finland. Only exclusive allergy hospital in the world, under direction of lady, Dr. Erikson-Lihr.

Your typographical slip is showing: AP release November 15, 1952: "The 0-year-old surgeon declined to say it was the largest tumor . . . in the history of medicine . . . but certainly the largest I've ever seen." But then, he's very young!



Theocalcin

For the Failing Heart of Middle Life

Prescribe 2 or 3 tablets of Theocalcin, t. i. d. After relief is obtained, continue with smaller doses to keep the patient comfortable. Theocalcin strengthens heart action, diminishes dyspnea and reduces edema.

Brand of theobromine-calcium salicylate, Trade Mark reg. U. S. Pat. Off.

Bilhuber-Knoll Corp. Orange, N. J.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Printed by The Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri.

UNIVERSITY OF MARYLAND LIBRARY Founded 1813 SCHOOL OF MEDICINE

Guest Editorial

Medical Ethics—Your Personal Responsibility

George F. Lull, M.D.
Secretary and General Manager, A.M.A.

More than fifty years ago Sir William Osler counseled, "Let the doctor pay heed to his ethics and his reputation will take care of itself." These

words mean far more today than they did in Osler's time for on every hand, the medical profession is under fire by those who would destroy its very roots.

We must endeavor to preserve and strengthen this idealism of ours so that the people will never forget that medicine's principal object is to "render service to humanity, rewards of any sort being a subordinate consideration."

Like the minister, the physician has a moral obligation to "go the second mile"—to give medical care to the rich and the needy, the friend and the foe.

In everyday life, however, ethics and economics overlap. Medical idealism leads the physician to place ethics first. But sometimes a few doctors lose a little of this idealism after graduation from medical school. These doctors sneer at idealism as something immature—a part of their childhood which must be shed.

That sort of thinking is wrong. Such doctors are only aiding those forces which are attempting to destroy the physician's position as a dedicated spirit working for the "common good of mankind." They are helping in no uncertain terms those insidious forces which would smear the profession and bring about the downfall of medicine's time-worn principles and ideals.

We cannot afford to be complacent over the fact that erring doctors form only a small part of our profession. An unethical act on the part of one physician spreads like wildfire in the hands of the medical profession's enemies.

Therefore, let us as individuals who make up the medical profession, re-consider our code. Let us improve public understanding of our ideals and practices.

Surely, the best way to accomplish this revitalizing of our profession's stand is to rededicate ourselves in the words of the founders of the American Medical Association, "The American Medical Association is dedicated to the promotion of the science and art of medicine and to the betterment of public health."

Let us also remember that one of our most solemn obligations is to promote our medical societies—to keep them vigorous and strong. Membership alone will not do this.

One of the prime responsibilities of medical societies should be to establish grievance committees to protect patients and to recommend proper disciplinary action. As our code says, "A physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession."

No medical organization can hope to gain the people's respect if it makes no effort to eliminate from its ranks those who would ignore medicine's ethical principles.

And last, but not least, tell your patients, your friends and neighbors what medicine really stands for. Tell them how it is accomplishing its ideals through countless good deeds.

Concerted effort on the part of each one of us will go a long way toward refocusing the distorted picture of the medical profession which medicine's enemies have labored so long to create.

We are engaged in a fight for survival—not only for free medicine but for our whole democratic way of life. Let us maintain confidence in ourselves, in our ideals and in our determination to serve the "common good of mankind," without thought of material gain.

If we maintain our ethics, we will continue the spectacular medical progress of the last half century and provide our citizens with the lead they are searching for.

the GROWTH of an idea

UNKNOWN even 20 years ago, today the names *Blue Cross* and *Blue Shield* are bywords on the lips of millions . . . standing for health care prepayment at its very best.

The almost incredible growth of these Plans in a brief space of years is an economic phenomenon of our times, keeping pace with medical progress. The 43 million people in Blue Cross and the 25 million in Blue Shield prove the public's confidence in the non-profit prepayment Plans . . . point the way to even greater service to greater numbers.

BLUE CROSS and BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Saint Louis
Kansas City

With Our G. P.'s

William J. Shaw, M.D.

The general practitioner, referred to as the most glamorous figure in the Pantheon of medicine, has been criticized in the past for his reluctance to aggressively participate in the activities of organized medicine.

William J. Shaw, M.D.

A survey of the elected and appointed officers of the Missouri State Medical Association for the current year will disclose that this criticism is not justifiable in Missouri.

The President-elect of the State Association, E. Claude Bohrer, M.D., West Plains, is active in general practice. Four of the eight state delegates to the American Medical Association do not limit their practice. Five of the ten Councilors in Missouri qualify as members of the Academy of General practice as do two members of the State Board of Medical Examiners. Dr. F. L. Harms, a general practitioner from Salisbury, was recently added to the long list of county society presidents when elected to preside at the Chariton-Macon-Monroe-Randolph County Medical Society meetings with the help of Dr. James Campbell, another general practitioner, who was elected vice-president.

Dr. Arch E. Spelman, Smithville, is chairman of the hard-working nine member Committee on Rural Health of the State Association, all of whom are general practitioners. Dr. Kenneth Glover, Mt. Vernon, in addition to serving as president of the Missouri Acadamy of General Practice, is a member of the Scientific and Post-Graduate Committee of the State Association.

Drs. F. R. Crouch, Farmington; John O'Connell, Overland; M. K. Underwood, Rolla; Royce Bohrer, Jefferson City; W. L. Allee, Eldon, and C. G. Stauffacher, Sedalia, are a few of the active committee members of the State Medical Association who are general practitioners.

General practitioners in Missouri take an aggressive part in supporting medical activities in the state, assist in molding the policies of the State Association and actively participate in a constructive way in all state and national medical functions.

Capsule Clinics

Irving A. Wien, M.D.

- The complications of parenteral fluid therapy are legion, they are: pyrogenic reactions, volume variations, changes in osmolar concentration, compositional disturbances and "speed" reactions. Mayer, C. A.: Fluid Balance, Year Book Publishers Inc., Chicago, 1952.

- Benign gastric tumors are uncommon; they constituted 2 per cent of the total number of tumors of the stomach during a twenty year period. Marshall, S. F.: *Kansas City M. J.* **28** (Nov.-Dec.) 1952.

- Thiamine is necessary for the utilization of carbohydrate by the body and is used up at the rate of 0.5 mg. for each 1,000 calories of intake. Advances in Medicine & Surgery, Graduate School, Medicine, University of Pennsylvania, W. B. Saunders Co., Philadelphia, 1952.

- The most common untoward reactions of aureomycin, chlorampheniacol and terramycin are nausea, stomatitis, diarrhea, proctitis and anitis. It occurs most often with aureomycin. Romansky, M. J., et al: J. A. M. A. **150** (Dec. 13) 1952.

- The presence of a positive "tuberculin test" indicates only "allergy" and should not be construed as "immunity," for by contrast it comprises a fundamental requisite for, rather than against, tuberculosis. Peabody, J. W.: J. A. M. A. **150** (Dec. 13) 1952.

- There is, in the light of current knowledge, no argument with the fact that a decrease in circulating blood volume is a prime factor in the development of the "shock mechanism." Bland, J. H.: Clinical Use of Fluid & Electrolyte, W. B. Saunders Co., Philadelphia, 1952.

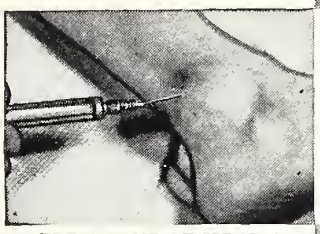
- It is quite generally agreed that stones under 8 to 10 mm. in their smallest diameter can still pass through the ureter to the bladder. Kiefer, J. H.: Surg. Clin. North America **30** (February) 1952.

- Human bite injuries which are seriously contaminated at the start should have early, adequate excision and measures to control aerobic and anaerobic bacteria. Mason, M. L., et al: Surg. Clin. North America **31** (October) 1952.

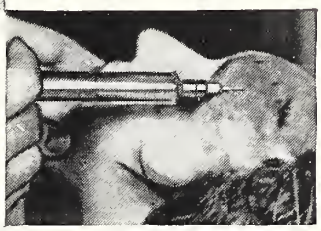
- Bacterial endocarditis was 100 per cent fatal before the advent of penicillin; now it is 70 per cent curable. Sprague, H. B.: American Heart **2** (Fall) 1952.

WYDASE HAS MANY IMPORTANT ADVANTAGES IN EVERYDAY MEDICAL PRACTICE

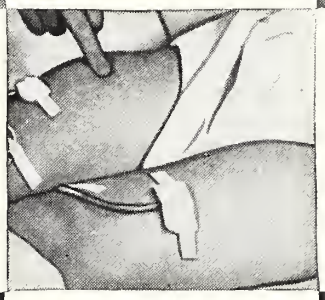
REDUCTION OF SIMPLE FRACTURES



TREATMENT OF SPRAINS



REDUCTION OF HEMATOMAS



HYPODERMOCLYSES

LOCAL ANESTHESIA

HYPODERMAL INJECTION OF CONTRAST MEDIA

Wydase softens tissue hyaluronic acid. This spreads *injected solutions* and *accumulations* of transudates and blood, facilitating their absorption.

Supplied: Vials of 150 and 1500 TR (turbidity-reducing) units.

Wyeth®

Lyophilized

Wydase®

Hyaluronidase

Important Note: Wydase is now Council-accepted for use in management of renal lithiasis

Forty Years Ago

Clyde P. Dyer, M.D.

February, 1913: Original article in the State Journal, "Quadriceps Transplantation in Paralysis," by Dr. Arthur E. Hertzler, a grand surgeon—presentation of a new urethrotome by Dr. H. McClure Young—report of Council on Medical Education listing in Missouri seven medical, one homeopathic, one eclectic, two osteopathic schools, Weltmer Institute of Suggestive Therapy and a postgraduate medical school—St. Louis University has announced that it will not give course in optometry—membership of the State Association 2,925—fees for expert witnesses in all cases should be controlled by legislative action—a need for State Alienist to supervise all four state hospitals at $7,500 a year—must visit each hospital at least once a month.

Clyde P. Dyer, M.D.

The old problem of liability insurance for doctors because of the increasing number of automobile accidents was renewed. Last year the state insurance superintendent issued an order prohibiting liability insurance for automobilists, physicians, surgeons, dentists and pharmacists, but withdrew the restriction against automobilists. Why are physicians not allowed insurance?

City Hospital election: Dr. L. S. Luton, chairman, Dr. O. H. Brown, vice-chairman, Dr. H. W. Loeb, secretary, Dr. G. Gelhorn, treasurer—Dr. R. B. Carman has accepted place as head of x-ray, Mayo Clinic—Dr. Jabez Jackson elected president of Western Surgical Association, M. G. Seelig, 2nd vice-president—next meeting in St. Louis—annual dinner of Medical Society of the City Hospital Alumni of St. Louis held at Washington Hotel January 9—Dr. George C. Crandall, Professor of Medicine at St. Louis U. Medical School, died December 5, 1912.

Stock fraud and 40 per cent commission to doctors who would buy stock in the American Hospital and send their patients to Dr. Emery Lanphear—resolutions condemning Optometry Bill passed by Phelps, St. Louis, Bates and Butler County Medical Societies—taxicabs give special services to physicians—next meeting MSMA in St. Louis May 13, 14, 15.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

Went to a Fathers' and Sons' banquet at the church last night with my Father. Dad was about the best represented Father there. Three sons (one away in the Marines) and a grandson. Funny situation, my little brother is four years younger than my son. This younger generation doesn't have nor show the proper respect for their elders. Pete won't call my little brother "uncle."

Funny thing happened. The main attraction for the evening was a magician show by a D.O. from a neighboring town. Good show too. And who do you think was his main assistant—yep thats right, me!! Do you think our union will have me on the carpet for assisting an (pardon that word) osteopath?

The dinner did stir up something besides my stomach. How often in this day of "womb to tomb" security we doctors see situations where sons no longer (if they ever did) assume any moral or financial responsibility for their old fathers. The story is usually like this: The old gent approaches 65, deeds his farm and turns most of his bank account over to the kids, moves to a little house in town, and the day he reaches 65 applies for his old-age pension, and soon starts drawing forty-eight bucks per. In the meantime he has visited his family doc for the first time in years so he can get a statement to take to the "welfare lady" and show her how high his doctor bill is and maybe he can get his pension upped—if he happens to vote right. Soon he really does get sick, can't take care of himself, and if he is lucky he moves in with a son, but then the check stops. They have got to live by themselves to draw it.

Guess I am too old-fashioned to keep up with this new deal philosophy. I can't believe that because animals leave their old to shift that human animals should do the same. Next thing they will have us shooting them like some folks do an old horse.

Somehow I feel the best social security yet should be raising a good-sized bunch of kids, like it was in the days when grandpa grew up. Who knows, maybe one of my daughters will marry rich!!

Your old-fashioned nephew,
Pete

CAMEL

Mild, Flavorful

Pack after pack!

AMERICA'S MOST POPULAR CIGARETTE

What Is Your Hobby, Doctor?

Siegel's Spit and Whittle Club

A healthy "chaw of Brown Mule" is most essential for the expert wood-carver, insists Peter Siegel, of Smithton. As a full fledged member of South Morgan County (Mo.) Spit and Whittle Club, he has learned to cheek a cud for three hours without spitting, and has "whittled" *objets d'art* which have earned him blue ribbons, medals and silver cups galore. Thus, his hobby has included the earthy and the ethereal.

Presidents Placque of the Missouri Academy of General Practice.

Pete's first carpentry was under the tutelage of his grandfather; his mother died when he was very young. Grandpa's helper early "learned to tell different kinds of wood by feeling it—across my back-side."

"My first really big job (in carpentry) was a three-hole Chick Sale, still in active service after twenty years." However, "plain old round holes were just too uncomfortable. Getting the right diameter was a problem. So, I undertook a scientific study; wherever I went I carried pieces of paper. When I saw an odd size, I'd ask them to sit down, so I could trace it out. When I tried this at Sunday School the project came to a screeching halt—with Grandpa applying the brakes."

"Over the years I have always carried a little grip with my carving tools and some wood in it. Some of them have been all over the U. S., the Pacific, the Atlantic and Mediterranean. I am a sucker in a hardware store. My favorite chisels are Buck Brothers. They run into a little money, up to five bucks for a small gouge. When I was in Italy last year I bought a dozen almost identical to Buck chisels, with very good steel, for 90 cents apiece. I now have a complete shop in my basement with power tools. But at the present time I have boiled my armamentarium down to the same old knife and the same three of four chisels. The rest are just to impress people."

"I have a cup and two medals from the American Physicians Art Association show, held with the AMA. Have several ribbons around from hobby shows."

"My media is always wood, hard wood (preferably walnut or mahogany) with a story behind it. For instance, an old gentleman patient of mine helped his father log walnut trees, saw them, and build a barn when he was 14 years old. When he retired at 85 he gave me a good supply of that walnut. It had been in the barn-loft drying for seventy years with just the right number of worm holes. For my money it is priceless. Friends, knowing my passion for wood, send me chunks from all over the world."

"I am firmly convinced that everyone, particularly doctors, should have at least two hobbies. One to pursue when they are young and vigorous, and another which requires little physical effort. The latter may be carried on in later years. The excuse so often heard is "I just don't have the time," does not hold water with me. My country practice is as busy and active as the next but I take the time at no expense and often to the advantage of my profession. The most pitiful, heartbreaking sight is to see a physician retire from his practice and then just dry up, to rapidly wither away because he never took the time to interest himself or learn anything but the practice of medicine."

(If you know of colleagues with interesting hobbies, please let us know. V. T. W.)

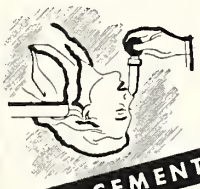
Blunders Are Too Hazardous

The problem of fluid and electrolyte balance is still too poorly understood and blunders are too hazardous to allow relegation of its management to a hospital routine and to rely upon the patient's kidney to make all the necessary adjustments. If the patient's kidneys are in good condition, he has no great need for a good doctor, but if his kidneys are in poor condition, he needs the best medical talent available.—Arnold Kremen, *Surgery*, November, 1952.

BY DROPPER...

SPRAY...

TAMPON...



DISPLACEMENT...

In Colds... Sinusitis

Neo-Synephrine hydrochloride is widely preferred as a decongestant in all stages of the common cold, sinusitis and allergic rhinitis because of its rapid and sustained action, virtual absence of sting, lack of appreciable interference with ciliary activity, virtual absence of congestive rebound and undiminished effectiveness on repeated use. As to use of nose drops or sprays, I have about come to the conclusion that Neo-Synephrine is one of the best for all purposes.[1] "... will produce exceedingly rapid and prolonged results."[2] "... action is sustained for two hours or more."[3]

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Prompt and Prolonged Nasal Decongestion

Neo-Synephrine®

HYDROCHLORIDE

¼% solution (plain and *aromatic*), 1 oz. bottles
½ and 1% solutions (when stronger vasoconstrictive action is needed), 1 oz. bottles
½% water soluble jelly, ⅝ oz. tubes

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Neo-Synephrine, trademark reg. U.S. & Canada, brand of phenylephrine

1. Warren, William C., Jr.: *South. Med. Jour.*, 44:449, May, 1951.
2. Voorhees, Darrell G.: *Ann. Otol. Rhin. & Laryng.*, 60:92, Mar., 1951.
3. Kelley, Samuel F.: In Gold, Harry, et al.: Cornell Conferences on Therapy. New York, Macmillan Co., 1947, vol. 2, p. 156.

Division of Health

James R. Amos, M.D., *Director*

The Bureau of the Laboratories of the Missouri Division of Health became actively engaged in its educational program for Milk Bacteriology and its application to Milk Analyses on November 27, 1950. The method developed at that time and continued since then has been in the form of workshops and personnel assistance to the individual laboratories performing milk analyses for official and nonofficial work.

The Missouri Plan for Milk Analysts was an outgrowth of the National Conference on Interstate Milk shipments held in St. Louis June 1950. The recommendation of that conference was that states shipping and receiving milk interstate may accept results from state official laboratories which have been approved as complying substantially with the American Public Health Association Standard Methods and checking closely with the results obtained at least twice a year on split samples. The state may approve local laboratories for milk analyses which should consist of an annual visit to the laboratory at which time evaluation of the quarters, equipment, procedures, results and record shall be made on appropriate survey forms of the United States Public Health Service or the equivalent. To insure uniformity, the United States Public Health Service may spot check the laboratories of the state agency participating in the certification of milk for interstate shipment and certify their compliance with standard methods.

Two workshops have been held in Missouri in cooperation with the University of Missouri School of Dairy Bacteriology and the United States Public Health Service—Environmental Health Center of Cincinnati, Ohio. The content of these workshops covered the basic objectives of quality tests on milk and developed uniform interpretation of Standard Methods of Milk Analyses, as well as establishing Standard Methods for Missouri.

From these two milk workshops a total of thirty-four individual milk bacteriologists and technicians in the state have profited from this working together. Approximately ten laboratories have been visited during the last year and assistance given by the Milk Bacteriologists from the Missouri Division of Health, Bureau of Laboratories. A clear understanding of the basic problems and complete cooperation have developed. Many of the laboratories throughout the state are obtaining the necessary equipment and laboratory quarters in order to conform with Standard Methods for the Examination of Dairy Products (1948) of the American Public Health Association. At the same time their technics of procedures and reporting have been improved. Thus, we in the Bureau of Laboratories feel that with this fine beginning and excellent cooperation of all milk laboratories the Laboratory Approval for Milk Analyses may move forward, giving many of the private and industrial laboratories the authority to perform milk analyses for milk intended for interstate shipment. At the same time it insures uniform results on all milk work giving the "Best Quality of Milk for All."

Progress Notes of Prepayment Plans

(St. Louis Blue Cross-Blue Shield)

The St. Louis Blue Cross-Blue Shield plans start their first nongroup enrollment this month. The counties served by the plans have been divided into ten areas with the first enrollment opening Monday, January 12, in Mercer, Grundy, Carroll, Saline, Pettis, Henry, Bates, Benton and Livingston counties. Headquarters will be located in the Bothwell Hospital in Sedalia for a four week period ending February 7. Anyone living in these counties is eligible providing he is under 60 years of age and not employed where there are ten or more employees. All industrial groups and Farm Bureau units will be permitted to make additions to their groups during the enrollment period in the area. The second enrollment will cover Vernon, Barton, Jasper, Newton, McDonald, St. Clair, Cedar, Dade, Lawrence and Barry counties with headquarters located at McCune-Brooks Hospital, Carthage, during the four week period from January 26 through February 21. The nongroup campaign will be assisted by newspaper, radio advertising and direct mail during the four weeks enrollment will be held in the respective areas.

The St. Louis Blue Cross-Blue Shield plans started an institutional advertising program recently designed to remind members of the unique services available only through these nonprofit hospital-doctor sponsored plans. The program includes newspaper, radio and billboard advertising in metropolitan St. Louis; radio and newspaper advertising in Hannibal, Cape Girardeau, Joplin, Springfield and Jefferson City and newspaper advertisements in all member hospital towns.

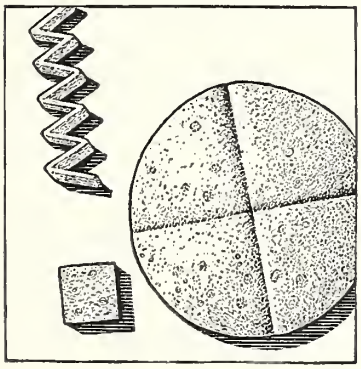
Upjohn

absorbable
hemostat:

Available in a large variety of sizes and forms, including:

Surgical sponges
Compressed surgical sponges
Dental packs
Gynecologic packs
Nasal packs
Prostatectomy cones
Tumor diagnosis kit

The Upjohn Company, Kalamazoo, Michigan



Gelfoam

Trademark Reg. U.S. Pat. Off. BRAND OF ABSORBABLE GELATIN SPONGE

President's Comments

The 1953 Annual Session will be held in Kansas City, April 26, 27, 28 and 29 at the Municipal Auditorium. As usual the meeting will revolve around the scientific sessions and the House of Delegates. Scientific and technical exhibits will again provide added attraction.

Good fellowship will prevail and a fine opportunity is offered to visit again with old classmates, friends and acquaintances.

It is hoped that this session will prove to be more interesting or at least as interesting as those in the past. Do not forget the dates—April 26 to 29, Kansas City. Write Hotel President for a reservation.

Incidentally, do you have a scientific exhibit you would like shown? Contact the Scientific Exhibit Committee, 623 Missouri Theater Building, St. Louis, prior to March 1.

J. William Thompson M.D.

Our Auxiliary

Mrs. Richard (Betty) Sutter, *President*

When someone asks what does the Auxiliary do, the first answer that comes to mind is "Public Relations." Although there are many phases of Auxiliary activity which can qualify under this heading, our fight against compulsory health insurance has been the most prominent for the last four years. Doctors' wives realize that their husbands are busy fighting the clock and it is up to them to lend a hand in informing the lay public of the pitfalls of government medicine.

Mrs. Richard (Betty) Sutter

Each county auxiliary has met this problem in the way best suited to its local needs, but all have used public relations meetings to which key representatives of lay groups are invited. In some counties these have been held in the evening and both men and women are included, although most are daytime meetings for women's groups.

Thus, presidents of such organizations as P. T. A.'s, Sodalities, Business and Professional Women's Clubs, A. A. U. W., church groups and the many Federated Clubs have been included in either luncheons or teas at which a speaker has discussed compulsory health insurance, and pamphlets have been distributed for use by the various clubs.

Even the small auxiliaries have participated. For example, Jefferson County Auxiliary with nine members, at least once a year, serves luncheon to 100 or more guests. Newly organized Franklin County Auxiliary reaches from 150 to 175, while auxiliaries in more heavily populated towns hold meetings for 300 or more. Several hundred resolutions against compulsory health insurance were directed to Senators and Congressmen by organizations reached through these meetings.

Although the ghost of government medicine is by no means completely laid, its major threat is certainly in abeyance. With a friendly administration in Washington we feel we can now concentrate on a positive program of Public Relations, to tell what medicine has accomplished and what it is trying to do today.

Not only through Public Relations meetings but also through the A. M. A. produced radio transcriptions, health day meetings worked out with other groups allied to the health field, exhibits at county fairs such as the prize winner of the Audrain County Auxiliary, are the auxiliaries meeting the need to correct the misunderstandings too frequently held by the public in regard to the practice of medicine. Your Doctors have produced a wonderful product; your Auxiliary is doing its best to help sell it.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1953, by Missouri State Medical Association. All Rights Reserved.

Vol. 50 February, 1953 Number 2

Scientific Articles

TRIGEMINAL NEURALGIA

SURGICAL DECOMPRESSION OF THE GASSERIAN GANGLION AND THE POSTERIOR ROOT OF THE TRIGEMINAL NERVE IN TREATMENT

ROBERT DEAN WOOLSEY, M.D.
ST. LOUIS
AND
JOHN L. K. TSANG, M.D.
ST. LOUIS

During the last fifty years, the surgical treatment of trigeminal neuralgia has become a fairly well standardized procedure with section of all or a portion of the posterior root of the fifth cranial nerve serving to give complete and permanent relief. The first retrogasserian neurotomy was done by Victor Horsley in 1891.[1] The trigeminal nerve was avulsed through a temporal approach, and the patient died seven hours later of shock. Because of the severity of the pain of trigeminal neuralgia, the surgical attacks on the nerve were continued and, for the last twenty-five years, the method of cutting the fifth nerve as described by Frazier[2] has been used by most surgeons in the United States and abroad. This author found that by cutting the lateral two thirds of the posterior root, relief for most patients with trigeminal neuralgia could be afforded. This left the ophthalmic branch intact and gave the patient normal sensation over the cornea and the forehead. The motor root was likewise spared. The complications sometimes encountered in patients whose fifth nerve had been totally or partially severed have led to continued efforts to improve on the method as described by Frazier. In 1938, Sjoquist[3] of Sweden severed the descending tract of the fifth nerve in the medulla and obtained relief from trigeminal neuralgia. The chief advantage of this procedure was that the sequelae of anesthesia and the paresthesias, or the burning and crawling sensations encountered in patients with fifth nerve section, was eliminated. This procedure, however, is of considerably greater magnitude than that of the retrogasserian neurotomy performed in the temporal fossa. Dandy[4] claimed certain advantages for section of the fifth nerve by the posterior fossa route. He stated that nearly 10 per cent of patients with trigeminal neuralgia had tumors of the cerebellopontine angle with pressure on the fifth nerve, and he claimed a much smaller percentage of neuroparalytic keratitis and paresthesias than that usually found when sectioning all or a portion of the fifth nerve through the temporal route.

SYMPTOMS AND SIGNS OF TRIGEMINAL NEURALGIA

Trigeminal neuralgia is a disease of older people, usually occurring in the sixth or seventh decade of life, and is rarely found in people less than 30 years of age. There is a slight predominance of the disease in women as opposed to men and, for some unknown reason, the right side of the face is involved more often than the left. The mandibular division is more often involved than either of the other two divisions, the maxillary division to a slightly less degree, and the ophthalmic division the least.

Trigeminal neuralgia is usually initiated by sudden, severe, lancinating type of pain occurring in one or more divisions of the fifth nerve, and this pain rarely, if ever, crosses the midline. When a patient is observed to have an attack of trigeminal neuralgia, he usually stops whatever he is doing, holds the side of his face and waits until the pain stops before he continues with what he is doing—talking, eating, washing his face. There is frequently a trigger area at the vermillion border of the upper lip, and when this trigger point is touched either by the hand or by food the pain is set off and some of these patients have great difficulty in eating. Some cannot wash their face and will appear with one division of the facial area unwashed and, in the male, frequently unshaved. The pain usually disappears as suddenly as it appears. There is no loss of sensation of the face in the patients with trigeminal neuralgia. It is more common in the daytime than at night; rarely does it keep the patient awake at night. Between attacks, when the patient demonstrates his pain to the examiner, he usually will point with one finger to the course of his pain. The diagnosis of trigeminal neuralgia should be suspected when the

patient lays the hand over the whole side of his face to demonstrate his pain. These attacks may come on at any time of the year although it seems that they are more common during the spring or fall of the year, during times of changing weather, than at other times.

DIFFERENTIAL DIAGNOSIS

The diagnosis and differential diagnosis of trigeminal neuralgia is made by exclusion and by the history only. There are no abnormal physical findings. The Costen[5] syndrome must always be considered and the temporomandibular joints should be x-rayed. Usually this diagnosis can be made by an inspection of the mouth, and a patient who has been long without the posterior molars, either of the upper or lower jaw, should have his bite mechanism corrected. Sinus disease can cause a typical attack of trigeminal neuralgia, and every patient suspected of having trigeminal neuralgia should have sinus x-rays. Tumors invading the floor of the skull from the nasopharynx can cause typical trigeminal-like pain, but these are usually accompanied by some degree of paralysis of the nerve with anesthesia of the corresponding area. Tumors of the cerebello-pontine angle usually have other neurologic accompanying signs such as deafness, difficulty in swallowing, dizziness. Migraine is usually characterized by visual symptomatology and is usually more prolonged in nature, although it is limited to one side. Histaminic cephalgia occurs more commonly at night, involves the whole side of the face and is characterized by unilateral lacrimation and nasal discharge on the side of the pain. This particular type of pain can be brought on by subcutaneous injection of histamine and relieved by an injection of adrenalin.

TREATMENT

The treatment of trigeminal neuralgia has depended largely upon the physician and to some degree upon the patient. These patients are usually reluctant to submit to operation, and do so only after they have had their pain for a period of months or years. In many clinics alcohol injection of one or more of the major roots at the point of emergence of these roots from the base of the skull is used as the beginning treatment, thus conditioning the patient to the anesthesia of his face. It has been our belief that alcohol injection carries a certain amount of complication with it, similar to the complications encountered in partial section of the posterior root. Furthermore, the alcohol injection is a painful procedure which rarely, if ever, cures the disease. Avulsion of the peripheral nerve at the supraorbital foramen, the infraorbital foramen, or the mental foramen has been practiced, and finds its most important use in those individuals in whom the trigeminal pain originates in the ophthalmic branch. Again, avulsion of the peripheral branches is purely a temporary measure as the pain usually recurs within about six months.

The operation of posterior root section has become a well standardized procedure, usually being done through the temporal fossa and, in most instances, the partial severance of the posterior root is done with preservation of the ophthalmic branch and motor root. On occasion, however, it has been necessary to cut the ophthalmic branch as well. When this is done, the patient is exposed to the possibility and danger of a neuroparalytic keratitis, with sometimes permanent damage to the cornea and loss of the eye. In certain individuals the morbidity after retrogasserian neurotomy has been extreme, with marked burning, numbness and a crawling sensation in the face. In our experience there is no relief for this particular condition. The mortality with this operation is less than 1 per cent, and this is remarkable when the age of the average patient is considered.

In May of 1952, Taarnhoj[6] of Copenhagen described a new procedure for the treatment of trigeminal neuralgia. He found a small epidermoid tumor of the cerebello-pontine angle in a 31 year old man with typical trigeminal neuralgia, beginning in the third branch on the right side. The tumor was removed at craniotomy, and he did not section the trigeminal root. The patient was completely relieved of his pain and remained symptom free. He then considered the possibility that there might be some anatomic compression of the fifth nerve root in its course under the petrosphenoid ligament and through the dura into the ganglion proper, and decided to attempt the cure of the patient with trigeminal neuralgia by simply opening the nerve sheath over the ganglion and the posterior root and by cutting the petrosphenoid ligament. He accomplished this procedure by the intradural route. The same procedure has been followed since that time by Love[7] and others at the Mayo Clinic by the extradural route with equally good and immediate results.

We have used the extradural procedure in four instances. All of these patients have had immediate and complete relief of their trigeminal neuralgia. Two patients have complained of a little dull, steady pain in their lower jaw, but this has disappeared within a week's time.

The operation by the extradural route is done in the same manner as the old posterior root section. A decompression incision is made anterior to the ear and just above the malar arch. The temporal muscle is incised and separated. Perforator opening is made into the temporal bone and enlarged to about the size of a quarter. The dura is then separated from the floor of the temporal fossa. The middle meningeal artery is coagulated and cut at the foramen spinosum. The mandibular division is then identified and injected with novocain containing a minute amount of adrenalin. The dura is then separated farther up over the gasserian ganglion to expose the posterior root at the point where it is reflected from the dura. This occurs at the petrosphenoid ligament. This procedure usually involves considerable more bleed-

ing than did the old procedure of simply cutting the posterior root. When the posterior root is completely exposed, there is usually considerable bleeding from the superior petrosal sinus and at the upper edge of the posterior root from the cavernous sinus. We have found these fairly easy to control by the use of gelfoam. When all bleeding has been controlled, an incision is made in the dura over the ganglion proper from the middle root, back into the posterior root, and then a small nerve hook is inserted behind the petrosphenoid ligament and this is cut with a pointed knife. The posterior root is completely decompressed and one can look directly into the posterior fossa at the emergence of the fifth nerve from the anterior border of the pons. One small piece of gelfoam is placed over the decompressed ganglion to keep any serum or blood from running back into the posterior fossa. The dura is then allowed to fall back into the temporal fossa along with the temporal lobe, and the wound is closed in the routine manner after all bleeding has been controlled.

In our hands, this procedure has given just as complete and immediate relief as was obtained by the use of the posterior root section. Our four patients have been 24, 65, 88 and 69 years old respectively. There were three females and one male. The duration of pain had been from two years to seven years. All three divisions were involved in three patients and only the maxillary and mandibular divisions in one patient. To date, none of these patients have had any recurrence of their pain. Doctor Taarnhoj's[6] patients were followed up to eight months and all patients were completely free of their preoperative pain, both the typical trigeminal neuralgia pain and the constant burning pain when the latter had been present.

Naturally, it is too early to be absolutely sure that these patients are going to have permanent relief from their neuralgia. However, it would certainly seem indicated at the present time that such patients should have only a decompression tried first. The nerve root can always be sectioned at a later date if the symptoms should recur and, if the procedure does continue to give relief, and if the relief is of a permanent nature, it would seem to be a great advantage to those patients whose trigeminal neuralgia is being treated at the present time if they could have merely a decompression procedure until a final evaluation can be made. A short résumé of the cases that have been done by us is presented.

CASE REPORTS

Case 1. Mrs. M. A., referred by Dr. C. H. Kilker, St. Louis, was aged 24, and had had her pain for seven years, involving all three branches of the right trigeminal nerve. This woman's pain had been almost constant since graduation from high school. She had had one alcohol injection of the maxillary division at one of the larger clinics with complete relief of her pain for about six months; then the pain began to recur. She did not wish to attempt a second alcohol injection.

Case 2. Mr. A. M., a patient at the Frisco Railroad Hospital, referred by Dr. Wilson Ferguson, Sikeston, Missouri, was a 65 year old male who had complained of pain for a little more than two years in all three divisions of the right trigeminal nerve. He had not had any alcohol injections. X-rays of his sinuses were normal.

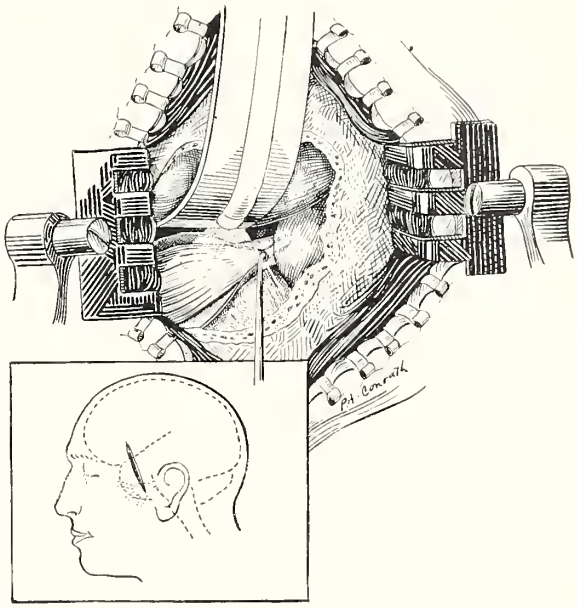


Fig. 1. Insert demonstrates the usual location of the temporal approach to the trigeminal nerve. Detailed drawing demonstrates the operative procedure with elevation of the temporal lobe and decompression of the nerve fibers of the Gasserian ganglion and posterior root. The nerve hook is shown within the sheath of the posterior root of the fifth nerve at the location of the petrosphenoid ligament.

Case 3. Miss M. M., referred by Dr. C. H. Kilker, St. Louis, was an 88 year old white female. This elderly woman had pain in all three divisions of her right fifth nerve, particularly in the course of the ophthalmic division. There had been no alcohol injection. She had obtained some relief from the administration of morphine.

Case 4. Mrs. M. W., referred by Dr. Waldo Forsman, St. Louis, was a 69 year old white female. This woman had suffered recurrent attacks of pain in the right lower jaw for a period of more than three years. These had been recurrent in nature and had finally begun to involve her maxillary division as well.

CONCLUSION

It is our opinion that at the present time, because of the immediate and complete relief afforded these patients with trigeminal neuralgia by means of a decompression of the gasserian ganglion and the posterior root, that patients suffering from trigeminal neuralgia should have the benefit of a simple decompression of the posterior root and of the gasserian ganglion. We feel that this is particularly true in those individuals who have ophthalmic branch neuralgia because of the complications that do arise when the posterior root is

totally sectioned, as is necessary in treatment of this type of neuralgia.

Additional Note: Two other patients have had this procedure done since this report was made with similar results. One of these is an individual who had a differential section of the maxillary and mandibular branches five years ago with marked paresthesias over the lower face and recurring pain in the ophthalmic division. She has been completely relieved.

BIBLIOGRAPHY

1. Walker, A. Earl: A History of Neurological Surgery, pp. 309-319, 1951.
2. Frazier, C. H.: The Surgery of the Trigeminal Tract, J.A.M.A. 77:1387-1390, 1921.
3. Sjoquist, O.: Eine neue operations methode bei trigeminus neuralgia: Durchschneidung des tractus spinalis trigemini, Zentralbl. Neurochir. 2:274-281, 1938.
4. Dandy, W. E.: Operation for the Cure of Tic Doloreux: Partial Section of Sensory Roots at Pons, Arch. Surg. 18:687-734, 1929.
5. Costen, J. B.: The Present Status of the Mandibular Joint Syndrome in Otolaryngology, Trans. Am. Acad. Opth. & Otolaryng. p. 809 (Nov.-Dec.) 1951.
6. Taarnhoj, P.: Decompression of the Trigeminal Root as Treatment in Trigeminal Neuralgia: Preliminary Communication, J. Neurosurg. 9:288, 1952.
7. Love, J. G.: Decompression of the Gasserian Ganglion and Its Posterior Root (A New Treatment for Trigeminal Neuralgia: Preliminary Report), Proc. Staff Meet. Mayo Clin. 27:(July 2) 1952.

Reader's Review

Irradiation in Advanced Carcinoma:

Report of thirty patients receiving pituitary irradiation as an adjunct to orchiectomy and stilbesterol therapy for prostatic carcinoma. Various total depth doses to pituitary discussed with favorable responses in all thirty patients. Optimum dose, technic and relationships to orchiectomy and stilbesterol have been determined. Effects of pituitary irradiation and its relationship to the other glands of internal secretion also discussed. *Pituitary Irradiation in Prostatic Carcinoma,* Murphy and Schwippert, Radiology, March, 1951.

In my experience, bone metastases with severe pain and retroperitoneal metastases, resistant to the usual methods of therapy, have been most benefited by supplemental pituitary irradiation. Joseph L. Fisher, M.D., Radiology, *St. Joseph.*

Water Balance:

During the last fifteen years fundamental laws have been established governing water, electrolyte and protein chemistry in man. Numerous difficulties encountered in successfully applying these principles in the acutely ill patient. Simplest explanation for this dilemma is that clinical medicine and surgery have not kept pace with the advances in physiology and biochemistry. Blame for this unfortunate lag is failure of clinicians to accept responsibility for applying to their ill patients the knowledge which has been gained from the flame photometer, studies of pH and other apparatus for the determination of fluid balance and electrolytes. *Fluid and Electrolyte Balance,* Surg. Clin. N. America, April, 1950.

It behooves all of us to learn and apply this knowledge. For the last several months we have been working hard on fluid and electrolyte balance and I believe we should make an effort to get all interested in the subject. Thomas S. Fleming, M.D., Internal Medicine, *Moberly.*

THE DIFFERENTIAL DIAGNOSIS OF CHEST PAIN

MAXWELL G. BERRY, M.D.
KANSAS CITY

THE FREQUENCY of the symptom of severe pain in the chest and the potential seriousness of this symptom are valid reasons for discussing its clinical aspects. The frequency and seriousness of chest pain can be well illustrated by the fact that almost half of a group of adult males will die sooner or later from a disease, the chief manifestation of which is pain in the chest. It is not necessary to elaborate upon the consequences which may follow failure to make a proper diagnosis when the patient has a potentially fatal disease. This mistake would be made, of course, if one interprets the pain of myocardial infarction as being due to some other condition. I expect that more than a few physicians have examined a patient completely, assured him that he was all right, only to have the doctor wrong within a few hours or a few days by sudden death. This is a serious and unfortunate error when it occurs. But more serious is the error of making the diagnosis of coronary heart disease when none exists. When this happens one may make a cardiac invalid of a person with no heart disease, because, when a man has been told seriously by a doctor that he has coronary heart disease, he will always afterward feel that he has it no matter who may tell him otherwise.

A few years ago it was necessary to impress upon doctors and medical students that many patients who had been diagnosed previously as having "acute indigestion" or something else, actually had coronary heart disease and myocardial infarction. The pendulum has swung too far the other way so that many patients who have no coronary heart disease have unnecessarily been made into invalids by this diagnosis when chest pain is due to some other cause.

I will discuss briefly the points which are found to be important in making this differential diagnosis in office practice.

Clinically, chest pain can best be classified by dividing it into five categories depending upon the causative condition: (1) coronary heart disease, (2) parietal chest pain, (3) pain in the chest due to gastrointestinal disease, (4) pain in the chest due to pulmonary disease and (5) pain due to cardiovascular conditions other than coronary disease.

Analysing 400 consecutive office patients whose chief complaint was pain in the chest, in 340 cases the pain was due either to coronary heart disease or to so-called parietal chest pain. These will be discussed more fully after the less common conditions encountered. By coronary heart disease is meant coronary insufficiency manifested by angina pectoris or coronary occlusion with resulting myocardial infarction.

Under parietal chest pain are listed pain in various parts of the chest wall, the nerves, the muscles, the bones and cartilage and the skin. By far the most frequent cause of parietal pain is nerve pain due to neuralgia, secondary to kyphosis, or arthritis, or trauma of the spine. The gastrointestinal and pulmonary diseases accounting for chest pain are not as frequent and neither are the cardiovascular conditions other than coronary disease which cause chest pain.

In arriving at a diagnosis in the patient with chest pain the system which has been found to be effective consists of a thorough understanding of the various situations which may account for chest pain, a careful, personally elicited history and physical examination, appropriate laboratory examination and determining the effect of medication. This starts, of course, with the most important feature of differential diagnosis which, as all know, is a careful painstaking history. This history must be taken in detail and must be taken in person by the physician responsible for the diagnosis. It cannot be left to the house staff and it is here that the doctor must realize that medical knowledge and experience and clinical judgment are not only the most important tools which can be employed but in many instances are the only means by which a correct differential diagnosis can be made. A careful, painstaking history by an experienced clinician is at least 90 per cent of the differential diagnosis. In addition to this, the important features discovered on physical examination, the results of various types of laboratory work, including the electrocardiogram, x-ray, blood studies and other definitely indicated laboratory procedures, and, last but not least, the result of the administration of certain medicine, more or less specifically designed to eliminate pain due to certain conditions.

The relief of chest pain by nitroglycerin points toward coronary disease as the cause of that pain. This is not 100 per cent specific[2] but it is an important feature in differential diagnosis. Also, in pain arising in the chest wall, the relief of the distress by the injection of local procaine serves to point strongly toward the origin of the pain in the parietal chest wall. How much morphine is required is also important as are other features which make the effect of medication on certain symptoms one of the important tools in the practitioner's armamentarium.

The gastrointestinal diseases which were found were hiatus hernia, cardiospasm and gallstone. The distinguishing diagnostic feature of hiatus hernia and cardiospasm is the fact that the pain is related almost always to the process of swallowing. In addition to this, x-ray examination with a swallow of barium will serve to differentiate them from pain due to the heart and the other causes which were found. In gallstones there is colic instead of steady pain, and spells coming on associated with no obvious cause.

In patients with mediastinitis, tracheitis and pleurisy, pneumothorax or emphysema associated with chest pain little difficulty is experienced in the differential diagnosis in most instances. But in pulmonary infarction one may have a sudden onset of pain in addition to the dyspnea which is the most characteristic feature of this condition. But the pain in pulmonary infarct ordinarily waits until pleurisy has developed and, if the patient lives long enough, one has sufficient auxillary help in addition to the history, including physical findings, x-ray findings, at times a more or less typical electrocardiogram and the development of hemoptysis. In pulmonary malignancy, pain usually is not a feature until either the pleura or spine has been involved.

The cardiovascular conditions, other than coronary disease, which account for chest pain in some instances may offer a rather confusing picture. This is true of pericarditis. The differential points are a more gradual onset of less severe pain in pericarditis, the persistence of the pain over a period of several days; usually positive physical findings including a pericardial friction rub of greater degree than one would expect with myocardial infarction[3] and the cardiac dullness is increased. The x-ray and electrocardiogram will usually serve to make the diagnosis.

Dissecting aneurysm is a somewhat different story in that the pain is usually sudden, severe and located primarily in the chest, the development of dissection into the extremities or the neck with obliteration of the pulse and blood pressure in the effected extremity, the absence of a coronary electrocardiographic pattern, the presence of a double aortic x-ray shadow at times and the much more severe character of the pain serve to differentiate this from coronary disease and from the usual parietal chest pain.[4] Saccular aneurysm offers little difficulty. Valvular disease is sometimes associated with precordial aching. Occasionally a patient with a high grade aortic insufficiency may develop, as a result of the insufficiency and probably also of partial occlusion of the ostia of the coronary arteries, a typical Herberden's angina. For practical purposes this is true angina pectoris. When there is a sudden disturbance of rhythm such as paroxysmal tachycardia, flutter or fibrillation there may be severe chest pain.[5] In this condition the history of the sudden onset of rapid, regular or irregular pounding of the heart, the finding of the irregularity and tachycardia or both on examination of the patient, the characteristic electrocardiogram and the relief of pain when the disturbance of rhythm is corrected should make the diagnosis. Asystole with carotid sinus syncope may at times cause discomfort of peculiar character in the chest.

Left now is the differential diagnosis of the two conditions found in 85 per cent of the patients who consulted me because of the symptom of severe chest pain. These are coronary heart disease and parietal pain in the chest. It is the differentiation of these two groups of patients

that is the most important and the most difficult feature in the differential diagnosis of thoracic pain. Coronary heart disease, for clinical purposes, can be divided into angina pectoris and coronary occlusion with myocardial infarction. This caused chest pain in 45 per cent of my series. I know well, as do most doctors who have seen many patients, that there is a transition stage between these two conditions but, for practical clinical purposes, angina pectoris and myocardial infarction will encompass all of the patients who are seen with coronary heart disease because they start out as angina in the majority of instances and they end up as coronary occlusion in the majority of instances, also. A patient with angina who develops pain at rest, an easily induced angina, pain which tends to last longer than ten minutes and pain which is rapidly increasing in its severity is on the verge of having a coronary occlusion. One can call this the second stage of coronary insufficiency or by any other name but it is an impending myocardial infarct and should be treated as a myocardial infarct.

I will next consider in the differential diagnosis angina pectoris. This clinical state is the pain in the chest which results from increased activity in the patient who has an insufficient arterial blood supply to the myocardium. Two important points are that angina pectoris exhibits intermittent or paroxysmal short spells of pain and it is rare in women under 50. In uncomplicated angina pectoris the history is the only means by which the diagnosis can be made. If the patient has positive physical findings he does not have uncomplicated angina pectoris. If he has positive laboratory findings, again he does not have uncomplicated angina pectoris. And, of course, a positive history together with definite relief by nitroglycerin or amyl nitrite makes the diagnosis of the typical case of Heberden's angina a relatively easy clinical task. No one since 1768 has improved on the definition first elaborated by William Heberden.[6] The pain comes on the patient while he is walking and when he stops the pain lets up and it is not associated with shortness of breath. The important thing is pain in the chest while walking, relieved by stopping. A patient may have pain when he is angry, he may have pain which awakens him from sleep, he may have pain on other forms of exercise than walking but, unless he has pain in the chest when he walks, it is almost certain that he does not have angina pectoris and that the pain is not due to atherosclerosis of his coronary arteries. So after the lapse of 184 years Heberden's definition is still the most important and in fact it is about the only method by which the diagnosis of angina pectoris can be made. In the various forms of anoxia tests the patient usually has thoracic pain before the electrocardiogram becomes positive and if the patient has pain as a result of the anoxia test he does not need to have the electrocardiogram taken, because the diagnosis is already made.

Coronary occlusion may be just the end stage of angina pectoris and in most patients who develop myocardial infarction there is a preceding history of Heberden's angina. The obtaining of this history of angina pectoris is important in the differential diagnosis of myocardial infarction. The pain is exactly the same in its distribution. It is greater in its intensity and the duration instead of being from three to ten minutes is usually at least one-half hour. Any patient with angina pectoris who has pain lasting for more than one half hour has myocardial infarction unless one can prove definitely that he does not. The pain of myocardial infarction may have its onset while the patient is in the act of walking or exerting himself in another manner, or it may come on at rest. In the nineteen years that I have practiced medicine I have never seen a patient with a coronary occlusion, or at least I have never recognized one, who had pain in the abdomen alone. I have seen patients who have had abdominal pain but they have also had chest pain. I have seen patients with atypical distribution of pain, but in almost every instance some of the typical, clinical earmarks of Heberden's definition of angina pectoris and the radiation of the pain into the chest and arms will be found if carefully searched for. As far as physical examination goes in the immediate early stage of myocardial infarction there may be no physical findings. The first sound may be less intense than it previously was. There may be a gallop, the blood pressure may fall, there is rarely pulsus alternans or other disturbance of rhythm and, early, there is no fever. Later, fever, friction rub, rhythmic disturbances and the secondary leukocytosis and increased sedimentation rate will appear. The electrocardiogram is of help and in about 85 or 90 per cent of patients will be positive sometime during the course of an acute myocardial infarction. The history is usually positive in about 98 per cent of cases.

There may be temporary relief of the pain by the use of nitroglycerin or amyl nitrite. The pain of myocardial infarction has never been relieved in my experience by the use of procaine injected over the precordium. So then one has little difficulty in making a positive diagnosis in the majority of patients with acute myocardial infarction. In the patient who has angina pectoris following a myocardial infarct the diagnosis is even easier than it is in uncomplicated angina pectoris because many of these patients will have a persistent electrocardiographic abnormality.

The last of the conditions accounting for severe thoracic pain which it is vitally necessary to differentiate from coronary heart disease is parietal chest pain. This was diagnosed as the cause of pain in 40 per cent of my cases. I have used this term rather loosely to include intercostal neuralgia, so-called segmental neuralgia, herpes zoster, the pain due to neuritis and myositis arising in the chest wall and that due to slipping rib cartilage but, in the majority of these

patients, the pain is apparently a neuralgia secondary to kyphosis, arthritis, occupational trauma, ruptured disk or other mechanical abnormality of the thoracic spine. I have not included those patients with mild pain such as one sees in the heart ache of mitral stenosis, the shooting pain in the breasts seen in nervous women or any mild degree of pain. In many instances the pain secondary to the abnormalities of the dorsal spine is even more severe than that of acute myocardial infarction and I have seen patients require as many as two or three hypodermics of morphine for relief. The differential diagnosis at times may be so difficult that it is impossible on the first few observations. But if one keeps in mind the following features, most of these patients can be accurately segregated. In the history of patients with parietal pain in the chest there may be pain in the chest and in the arms when the patient walks but, practically always, it is when the patient is carrying something. Davis and Ritvo[7] have stated that in a few of their patients the pain does come on while walking and it is relieved when the patient stops, but the patient always stretches or changes position or does something to mechanically influence the posture in his upper dorsal region and it is this change in the contour of the upper spine which relieves the pain. I have seen few, if any, of these patients who have pain in the chest on walking without carrying something. The typical history in patients with parietal pain, however, is that the pain comes on them when they stoop, lift, turn, drive an automobile, iron or engage in some activity which throws a strain on the dorsal spine. The pain may be aggravated by these activities or by breathing or coughing. The pain may be localized over the precordium or generalized over the chest, frequently radiates down the arms, sometimes characteristically goes to the back but frequently pain is not felt in the back. It may be localized to a spot the size of a silver dollar over the precordium or elsewhere in the chest. The duration of the pain is also of importance in differential diagnosis since parietal chest pain usually lasts longer than a few minutes: in fact, may be present and usually is present over the entire course of several hours or days. The character of the pain is usually that of a steady pain; frequently a history of intermittent stabbing pain followed by soreness may be elicited, but it usually does not occur solely as paroxysms. On physical examination the positive findings are tenderness of the chest wall, which is present in practically every instance, thus serving to differentiate it from myocardial infarction and coronary heart disease in which the chest wall is never tender. There is usually also tenderness over the upper or middle dorsal spine on fist percussion and on motion and there may be characteristic kyphotic deformity of the spine pointing to the underlying condition. Of the helpful laboratory procedures the electrocardiogram is, of course, negative. An x-ray of the dorsal spine may help by showing a more than moderate degree of lipping of the dorsal vertebra or other abnormalties. Last but not least is the fact that when the tender areas of the chest wall are injected in the subcutaneous region by procaine the pain is frequently relieved and the tenderness practically always relieved, and there is usually no relief of the discomfort by the nitrites. However, in some instances nitroglycerin apparently does relieve pain in fibrositis and other rheumatic conditions. In addition to this the relief afforded by the correction of the dorsal spine deformity by mechanical means, by the use of salicylates and avoidance of the traumatic activities serve to make the final diagnosis of parietal pain more certain.

Finally there are a number of patients who have more than one type of chest pain. These cases can be confusing but if there is positive diagnostic evidence pointing to both parietal pain and coronary heart disease, both should be diagnosed and both treated. The careful clinical separation of these cases and their clinical management is a gratifying pursuit but occasionally it may take the passage of a sufficient amount of time and a pathologist to make the final diagnosis.

SUMMARY

1. In differential diagnosis of chest pain one should always remember that it is worse to make a positive diagnosis of coronary heart disease when none exists than it is to miss this diagnosis when the disease is present.

2. The commonest condition from which coronary heart disease must be separated in an office practice is parietal pain.

3. A careful history is still by far the most valuable tool in making a differential diagnosis in chest pain.

4. It is emphasized that the relief of pain by certain therapeutic procedures may be an important differential diagnostic point.

Plaza Medical Building.

BIBLIOGRAPHY

1. Levine, S. A.: Clinical Heart Disease, Philadelphia, W. B. Saunders Co., 1951.
Smith, J. R.: Thoracic Pain, in Mac Bryde, C. M.: Signs and Symptoms, Philadelphia, J. B. Lippincott Co., 1947.
Harrison, T. R.: Principles of Internal Medicine, Philadelphia, The Blakison Company, 1950.
White, P. D.: Heart Disease, New York, The Macmillan Company, 1952.
2. Dixon, R. H.: Cure or Relief of Cases Misdiagnosed "Angina of Effort," Brit. M. J. **2**:891 (October 29) 1938.
3. Barnes, A. R., and Burchell, H. B.: Acute Pericarditis Simulating Acute Coronary Occlusion, Am. Heart J. **23**:247, 1942.
4. Logue, R. B.: Dissecting Aneurysm of Aorta, Am. J. M. Sc. **206**:54-66 (July) 1943.
5. Bohan, P. T.: The Arrythmias, in Myers, J. A., and McKinley, C. A.: The Chest and Heart, Springfield, Charles C Thomas Co., 1948.
6. Heberden, William, from Major, Ralph H.: Classic Descriptions of Disease, Springfield, Charles C Thomas Co., 1945.
7. Davis, David, and Ritvo, Max: Arthritis of the Cervicodorsal Spine (Radiculitis) Simulating Coronary Artery Disease, New England J. Med. **238**:857 (June 17) 1948.

CARBON TETRACHLORIDE POISONING

H. K. B. ALLEBACH, M.D.
KANSAS CITY
AND
W. R. McPHEE, M.D.
KANSAS CITY

IGNORANCE REGARDING the toxicology of organic substances in common use is a lamentable failing. It becomes critical when it extends to the medical profession. Not only is a history of occupational or accidental exposure frequently minimized, but, often no effort is made to elicit such information from patients presenting classical signs and symptoms of poisoning.

This paper is presented to reemphasize the potency of carbon tetrachloride as a poison by a complete discussion of its toxic properties and by presenting another fatal case due to its use. Newer aspects of therapy are outlined in the hope that more lives may be salvaged.

Carbon tetrachloride is a health hazard and should be used with extreme caution. It has been called one of the most toxic chemicals used in industry. It is equally as dangerous in the home. It is a renal poison, equivalent in importance to mercury.[24]

INCIDENCE

In 1939 Smetana[49] reported 141 cases of poisoning from carbon tetrachloride, 138 of which were obtained from the literature and three original cases. In 1943 Quadland,[42] reviewing the literature, reported an additional 200 cases. Since 1943, another 255 cases have appeared in the English language literature and a significant number of cases have been reported in the foreign language literature.

The reported cases are undoubtedly a small fraction of the actual incidence. Many cases go unrecognized because they are unsuspected. One excellent case finding survey[13] reported a hospital incidence of carbon tetrachloride poisoning double that for subacute bacterial endocarditis, which is certainly considered no great rarity.

MORTALITY

Of the 596 cases reported, ninety-eight were fatal, a mortality rate of 16.5 per cent. This does not seem to be a prohibitive number, but more than one half the cases reported were groups in industry briefly or lightly exposed to concentrations not exceeding 100 parts per million in air. Excluding these cases, the mortality rate increases sharply.

ETIOLOGY-SUSCEPTIBILITY

Through ignorance, carelessness or malice, the agent can easily gain access to the body in toxic amounts by inhalation, ingestion or absorption through the skin. Quantities in excess of one teaspoonful orally, or the vapor from one cupful in a poorly ventilated room, have been sufficient to cause death. Generally accepted safe concentrations are 50 to 100 parts per million in air.[11, 18] The evaporation of one half pint of carbon tetrachloride in a room 50 by 50 by 15 feet (37,700 cubic feet) will produce a concentration of 50 parts per million in thirty minutes.[38] The vapor, being heavier than air, concentrates in the lower recesses of the room.

Dangerous concentrations have been studied and are as follows: (1) 5,000 parts per million in air endangers life in thirty minutes; (2) 50,000 parts per million in air can be fatal within five to ten minutes; (3) concentrations above 50,000 parts per million are dangerous to life on brief exposure;[9]. . . (4) 3 to 4 cc. taken internally have been responsible for death on more than one occasion;[31, 37] (5) twenty-five to fifty parts per million on chronic exposure may be a sufficient concentration to produce toxicity.[11]

Early articles concerning carbon tetrachloride indicate the majority of poisonings occurred with industrial use. At the present time fatalities are more frequently due to isolated or individual use.

Agents not commonly known to contain carbon tetrachloride include the following: Carbona, Energine (noninflammable), Asordin, Chlorasol, Phoenipine, Katarine, Pyrene, Spectral, Tetra, Tetracol and Tetraform.

The estimated current annual production rate for carbon tetrachloride in the United States is approximately 270 million pounds. Of this yield 35 per cent is used in the manufacture of other chemicals, chiefly Freon, a refrigerant; 20 per cent in the manufacture of fire extinguishers, particularly as Pyrene; 20 per cent in dry cleaning operations and 3 per cent in agriculture as a fumigant for grain. The remaining 22 per cent finds miscellaneous and solvent usage.[43] The antihelmintic properties of the chemical are well known by the medical profession but few are cognizant of its use as a solvent for crude rubber and tar resins, its presence in soap solutions, insecticide sprays, dry hair shampoos and its free use by the military, particularly as a cleaning agent.[46]

It is a fact that the ingestion of alcohol just prior to, during or immediately following exposure, greatly increases the hazard of toxic reactions. Other factors increasing susceptibility to poisoning are obesity, excessive exertion, a heavy meal (especially a fatty meal), high environmental temperature, previous nephritis, diabetes mellitus, chronic heart disease and changes associated with senility.[13, 18, 24, 38] Zinc chromate lacquers containing a nitrocellulose base and petroleum spirits containing acetylene or ethylene are capable of oxidizing carbon tetrachloride to phosgene on contact.[17]

It has been repeatedly emphasized that carbon

From the Department of Pathology, Research Hospital, Kansas City.

tetrachloride is capable of forming phosgene on heating but few cases are cited in which this factor merits emphasis.

SYMPTOMS AND SIGNS[45]

1. *Immediate*—Headache, dizziness, weakness, sense of intoxication, blurring of vision, malaise, unconsciousness and coma, followed by severe irritation of all mucous membranes.

2. *Complicating*—Jaundice, hematuria, oliguria and anuria with nitrogen retention and edema, hypertension and muscular irritability at times leading to convulsive seizures. Pulmonary edema and pneumonia occur as late complications of irritation by inhalation or uremia, toxic myocarditis with failure, or, as is often the case, overzealous administration of parenteral fluids. Hemorrhagic diathesis with epistaxis, generalized petechiae and ecchymoses may occur.

3. *Classical*—Headache, malaise, nausea, vomiting and abdominal cramps followed in from one to three days by jaundice and in from three to eight days by oliguria or anuria with edema and nitrogen retention.

Symptoms, of course, vary with the degree of exposure and with the susceptibility of the host. The severity of the effects produced are usually directly proportional to the quantity absorbed in the absence of predisposing factors. Involvement of the brain, heart, gastrointestinal tract, liver, kidneys, lungs, adrenals and pancreas may occur singly or in any predominate combination or as a generalized reaction.

PATHOGENESIS

Absorption, distribution, elimination.—Carefully performed studies on rhesus monkeys utilizing carbon tetrachloride tagged with radioactive C-14 recently have been reported.[30]

Animals were sacrificed in order to determine the tissue distribution of carbon tetrachloride. The highest concentration of radioactive material was found in the fatty tissues of the animal with progressively decreasing amounts in the liver, bone marrow, blood, brain, kidney, heart, spleen, muscle, lung and bone.[30]

General Considerations.—Carbon tetrachloride is a known protoplasmic poison and, as such, accomplishes central nervous system depression in much the same manner as chloroform and ethyl alcohol. However, it is considered to be at least twice as toxic as chloroform and about 200 times as toxic as alcohol. The usual pattern of injury on the basis of cell specialization and oxygen utilization is seen with the additional factor of greater concentration in the liver and kidneys due to their physiologic functions. In these locations a direct toxic effect on the hepatic cells and the epithelium of the renal tubules is observed. Myocardial muscle and pulmonary alveolar linings are injured but usually to a lesser degree.[38]

Synergistic Action of Alcohol and Fats.—Alcohol increases the solubility of carbon tetrachloride in biologic fluids because the chemical is entirely miscible in alcohol and only soluble in low concentration in water. Virtually the same interaction occurs with respect to fats and oils when these are present in the gastrointestinal tract. Naturally occurring fatty tissues store the chemical in high concentration.

Effect on the Liver.—The central necrosis is largely due to anoxia of the central areas of the liver lobules as a result of parenchymal swelling and a reduction in the caliber of sinusoids leading to that portion of the lobules. A reflex constriction of smaller radicles of the hepatic vein may play a part. This leads to a delay in the transfer of pigment and metabolites from the liver cell into the bile canaliculi but no immediate effect on extraction of these substances from the blood stream. An increasing functional damage occurs, the hepatic cells become "saturated." This is reflected in a failure to effectively remove pigment and metabolites from the blood stream.

Effect on the Kidneys.—An initial glomerulitis with increased endothelial permeability apparently occurs. It is marked by the presence of gross blood and albumin in the urine at, or just before, the onset of oliguria. Cells lining the tubular system swell and many desquamate so that a back diffusion of glomerular filtrate occurs through the damaged tubular walls. In effect the kidney is urinating into itself instead of into the bladder. This mechanism is responsible in part for the oliguria observed. Swollen tubular cells and severe interstitial edema with collection of blood and cellular debris in the tubular system markedly reduces effective glomerular filtration pressure. Both edema and local tissue irritation bring about a reduction in arterial and arteriolar lumina with a marked reduction in renal blood flow. Additive effects cause a complete bilateral renal shutdown in a progressive manner. Satisfactory excretion of sodium and water as well as potassium and other electrolytes and the by-products of protein metabolism is prevented. Water and sodium are retained with a resulting great increase in circulating blood volume or plethora. This soon leads to a "high output" type of cardiac failure with pulmonary edema.[7, 25, 26, 48]

It is impossible to understand how anyone could believe that the kidneys could be "forced" to excrete water and electrolytes during the stage of anuria or oliguria. The administration of excessive quantities of fluid either with or without salt but particularly with salt overloads an already overloaded circulatory system. Time after time such therapy has quickly led to profound pulmonary edema and there is no reason to believe that it will not continue to do so in the future.

Hemorrhagic Diathesis.—The onset of acute liver damage leads to markedly reduced prothrombin activity. The production of platelets by the bone

marrow is reduced by a direct toxic action leading to a prolonged thrombocytopenia. Nonspecific toxic effects on capillary walls occur. There is a marked reduction in plasma fibrinogen.[25]

PATHOLOGY

Three reactions to toxic doses occur: (1) Acute narcosis with death occurs within a few hours from an overwhelming depression of the central nervous system or ventricular fibrillation[23] and little manifestation of the poisoning within the tissues of the body either grossly or microscopically. Usually passive congestion and hyperemia with occasionally severe granular degeneration of hepatic cells are all that can be demonstrated. The chemical, however, can be extracted from the tissues and the events leading to the death should leave no doubt as to its cause. (2) Subacute: Immediate symptoms, less profound, are followed within from one to ten days by severe visceral damage affecting principally the liver and the kidneys. These changes are not stationary but undergo a gradual evolution and regression so that the pathologic picture at varying intervals from the time of exposure is constantly changing. The stages of development have been thoroughly described by Moon.[35]

Others describe acute gastroenterocolitis with subacute or chronic peptic ulceration complicated by bleeding or perforation at about seven to ten days following exposure.[5, 50] These changes occur principally following ingestion of the chemical. (3) Chronic exposure to low concentrations may produce gradually progressive hepatic damage ending in cirrhosis, optic neuritis with toxic amblyopia[51] and partial or complete loss of vision or generalized peripheral neuritis.[12] Chronic skin exposure leads to dryness and scaling of the skin with factitial dermatitis and to brittleness with cracking and chipping of the fingernails.[17]

The liver lesions resemble those produced by numerous hepatic poisons by severe chronic passive congestion and by infectious or serum hepatitis. Those of the kidney are quite similar to the lower nephron nephrosis seen following crushing injuries, incompatible blood and shock.

Less commonly mentioned is the occurrence of a severe hemorrhagic diathesis marked by generalized petechiae, ecchymosis, epistaxis, hematemesis, hemoptysis, hematuria and melena.

Autopsy evidence of carbon tetrachloride poisoning may be confirmed by the demonstration of the chemical in tissues by one of two methods.[52, 56] The later method was developed by Spain and Frey[52] as a modification of one first proposed in the German literature, and is a satisfactory procedure, as outlined, for detecting the chemical as late as twenty-four days following exposure.

DIAGNOSIS[45]

The symptoms of poisoning due to organic solvents coincide to such a great degree that differentiation is well nigh impossible on that basis alone. The diagnosis thus rests upon an inquisitive mind not willing to pass off the severe headache, nausea, vomiting and abdominal cramps as "another case of food poisoning" or "intestinal flu," or "a virus infection" or "psychosomatic."

A positive diagnosis can be made in every case in which a history of exposure to potentially toxic concentrations of a chemical can be obtained. Certainly an attempt should be made to obtain such a history in every case showing hepatic or renal insufficiency.

The patient seldom thinks to associate jaundice or anuria with exposure to carbon tetrachloride fumes. Unless his occupational history suggests the use of the chemical, the cause of the patient's illness will only be obtained by direct questioning about the specific agent and its many aliases.

The index of suspicion should be raised to diagnostic level by the association of gastrointestinal symptoms, liver damage and suppression of renal function, occurring in that order.[38]

Early in the course, the symptoms may suggest an acute abdomen due to appendicitis, acute pancreatitis, acute cholecystitis or perforated peptic ulcer. Pulmonary symptoms and the chest x-ray frequently suggest bronchial pneumonia. The patient often tries to relate his symptoms to "something he ate" and it is too easy to fall in with him.

Electrocardiograms reveal changes denoting severe acute myocardial damage with various arrhythmias, transient variations in T-wave configuration and temporary increase in P-R intervals as well as changes in the contour of P-waves and Q.R.S. complexes.[6] The great variability of these changes from day to day in the same patient should rule out heart disease as the primary condition.

Infectious or serum hepatitis, obstructive jaundice, hepatic metastases and acute exacerbation of chronic glomerular nephritis or acute urinary retention may receive passing consideration during the course of differentiation.

TREATMENT[16, 39]

There is no specific antidote for carbon tetrachloride poisoning. Treatment is, of necessity, symptomatic and supportive, aimed at keeping the patient alive until he can repair his own damage.[13, 25,26]

Gastric lavage in cases of ingestion is worthwhile within the first hour following exposure, and useless thereafter except as a means of aiding excretion of nitrogenous waste products with the onset of uremia.

Cases with acute depression of the central nervous system should receive oxygen, stimulants and artificial respiration, if necessary, as well as maintenance of a clear airway. Acute cases exhibit marked myocardial irritability so that cardiac stimulants such as adrenalin are contraindicated.[18]

Fats, oils and alcohol in any form are contraindicated.[1]

Complicating hepatic injury should receive the same attention given hepatic insufficiency in any form with respect to high caloric, high carbohydrate, high vitamin, low protein, low fat diet, rest and avoidance of hepatotoxic agents.

Vitamin K in the form of the naturally occurring K-1 and fresh whole blood transfusions are necessary in the case complicated by a hemorrhagic diathesis.

Calcium has received a great deal of attention as a therapeutic agent and apparently acts to neutralize the collection of toxic quantities of quanindine. It should be administered intravenously in the vomiting patient in the form of 10 per cent calcium gluconate and may be given as often as needed.[2]

In the nephrosis induced by carbon tetrachloride it is the acute and at times complete renal shutdown which is likely to stimulate overzealous therapy, particularly with regard to parenteral fluids and "correction of electrolyte imbalance" and with attempts to rectify what seems to be a severe retention of nitrogenous waste products. In the words of Friedberg,[16] "Azotemia, hypochloremia and acidosis during the brief period of renal disturbance are rarely if ever of sufficient degree or duration to cause death. In cases of lower nephron nephrosis there may be no excretion of sodium at all. The administration of sodium which seems theoretically justified induces edema contrary to calculations."

The hallmarks of congestive failure lead to death in these patients, namely; water retention, circulatory overload, cardiac embarrassment and pulmonary edema. Accordingly total fluid intake should be restricted to not more than 800 ccs. in twenty-four hours. No sodium should be given during the stages of oliguria and anuria. Protein also should be restricted during this period. Particularly in the vomiting patient, one is tempted to "replace" lost chloride but restriction is the rule even with considerable vomiting.

The collection of toxic levels of potassium as determined by daily serum potassium determinations or, in the absence of a flame photometer, the electrocardiogram, is a difficult entity to combat. The artificial kidney has been used with success, but is not generally available. Intestinal lavage and exsanguination transfusion or both may be necessary measures.

With the onset of peripheral or pulmonary edema phlebotomy should be remembered as an effective measure in "high output" failure. In view of the severe azotemia and acidosis already present in renal damage, mercurial diuretics, urea and acidifying salts are contraindicated. Digitalis, if administered, should be used in the form of a rapidly eliminated glycoside to avoid collection during delayed elimination.

In the diuresis which follows anuria, hypochloremia and hypopotassemia should receive attention. During this stage from 5,000 to 8,000 cc. of saline in twenty-four hours is occasionally necessary.[39]

The management during the first week of renal insufficiency usually determines the outcome. The patient should not be "drowned." The kidney changes described are completely reversible if the patient can be tided over a short difficult period.

PROPHYLAXIS

Many of the cases reported could have been prevented by the simple precaution of proper ventilation.[1] The fact that carbon tetrachloride masquerades under a host of trade names without, in most instances, its presence being indicated, is responsible for many mishaps.[2] For this reason the chemical sold in any quantity or any mixture containing a significant quantity "should be clearly labeled with the skull and cross bones and the words, volatile solvent—poisonous. One teaspoonful taken by mouth may be fatal. The fumes from one cupful breathed in a poorly ventilated space may cause death. Use with adequate ventilation. Avoid prolonged or repeated breathing of vapor. Avoid prolonged contact with the skin. Do not take internally."[32]

The use of the chemical in cleaning operations involving the use of hand sprays should be outlawed. No other single application of carbon tetrachloride is as productive of as much personal exposure as is the degreasing of various types of machinery, particularly electrical equipment in which hand sprays are frequently used.[15]

Wherever possible, another cleaning agent should be used. In many instances a good detergent soap would accomplish the same tasks more effectively.

The recommendation of the Oregon State Board of Health that 50 PPM or .005 per cent in air be the maximum allowable concentration should be generally adopted.[28]

Apparently the chemical is most popular where supervision and respect for its toxicity are least. In this regard the familiar bottle of carbon tetrachloride in the chemical laboratory should be the subject of a dissertation on its toxic properties by teachers in that field while, in fact, we doubt if any one can recall ever hearing a word on this subject in the classroom or the laboratory. More instruction of professional and lay groups concerning dangerous solvents, the symptoms of exposure to them and the emergency care of victims must become a reality if progress is to be made in any program of prevention.

PROGNOSIS[16, 39, 25, 26]

Above a variable threshold damage is so widespread that little can be done and the downhill course is rapid and relentless.

Nearly all of the deaths reported have been in patients suffering from renal shutdown. These

cases usually terminate in death or spontaneous recovery within two to three weeks following the initial injury although anuria in isolated cases has occurred for as long as seven weeks with recovery. In the average case anuria for ten to twenty days seems to be the rule followed by a period of marked diuresis of four to seven days (occasionally lasting two to three weeks); urine output may reach seven to eight liters in twenty-four hours in this stage.[39] The blood nonprotein nitrogen may continue to rise during the initial period of the stage of diuresis but soon begins a gradual fall over a period of several days to normal. The ability of the kidney to concentrate urine maximally is the last tubular function to return, requiring up to 200 days following initial injury.[39]

CASE REPORT

Case 1. R. E. C., white male, aged 39, was admitted to Research Hospital on April 6, 1951, with the chief complaint of abdominal distress, nausea, vomiting and anuria.

Present Illness: Three days before admission the patient ate a bowl of chili and had a glass of milk. Following this, he developed nausea with abdominal cramping but did not vomit. The discomfort continued and on the following day, April 4, 1951, the patient came to the emergency room of Research Hospital where, on the basis of a past ulcer history, he was advised to try a milk and cream diet. He returned the next day with the same complaints, was unable to urinate, and was catherized but no urine was obtained. Later the same day he vomited several times. His urinary output in the last eighteen hours had been somewhat less than 200 ccs.

Past History: A single episode of epigastric cramping with tarry stools was interpreted as peptic ulcer two years previous to admission. There was no ingestion of alcohol before or during present illness and there was no known previous renal disease.

Physical Examination: Temperature on admission was 99 F., pulse 64, respiration 20, blood pressure 150/105. The abdomen was tender to palpation in the epigastrium in the midline. There was slight tenderness in the right side of the abdomen and in the right flank. The patient also complained of suprapubic discomfort and tenderness.

Laboratory Examinations: Hgb. was 13.3 grams or 83 per cent; red blood count 4,280,000; white blood count 5,200 with 72 polymorphonuclear leukocytes, 9 eosinophils, 12 lymphocytes and 7 monocytes. Blood Wassermann, Kline, and V. D. R. L. were negative. Specific gravity of urine was 1.012, reaction alkaline, albumin 3 plus, sugar negative. Blood nonprotein nitrogen 98 mg. per cent, chlorides 415 mg. per cent. X-ray examinations of chest, abdomen, both ankles and both wrists were normal on April 7, 1951. On April 9, 1951, the hemoglobin was 11.8 grams or 74 per cent; red blood count 3,400,000; white blood count 6,000. Urinalysis showed albumin again 3 plus and the specimen was loaded with red blood cells. Blood nonprotein nitrogen on this date, 118 mg. per cent; total protein 7.3 grams. A/G ratio 1.3/1.

On admission to the hospital, the patient was immediately given 3,000 cc. of 5 per cent glucose in saline. He was also given amethone, 2 ccs. every three hours and banthine 1 tablet every 6 hours. The following day he was given aminophyllin grains 7.5 intravenously. On April 9, 1951, x-ray of the chest gave the impression of bilateral lower lobe pneumonia, and a flat plate of abdomen was normal. On April 10, 1951, hemoglobin was 79 per cent, essentially normal red and white counts. The blood nonprotein nitrogen was 123 mg. per cent; CO_2 combining power 34 volumes per cent; icteric index 14. An electrocardiogram taken April 10, 1951, showed changes interpreted as indicative of myocardial ischemia. It was not until April 10, 1951, that the patient's occupation was investigated during the course of a consultation by the internal medicine department. It was found that on April 3, 1951, and again on April 4, 1951, the patient had spent approximately four hours each day spraying carbon tetrachloride while cleaning some weights at the plant where he had worked for five months as a spray painter. He also sprayed various varieties of paint compounds, including lacquer, lacquer finish and thinner. This was done in a room in which a fan was so placed as to blow the fumes away from the sprayer toward a paint compartment in which a suction fan was present and which supposedly would draw the fumes from the area. A consulting engineer investigated this suction fan later and felt that it was inadequate for its purpose. The patient's urinary output remained restricted totaling only 940 cc. for his first four hospital days. He then became completely anuric, respirations became labored, cyanosis was noted and the patient became semicomatose. A presumptive diagnosis of pneumonia was entertained at that time and the patient was placed on penicillin, 600,000 units twice a day, oxygen by nasal catheter and appropriate symptomatic and supportive care. The urine albumin contained 3 plus positive with red blood cells on microscopic examination. The blood nonprotein nitrogen was recorded as 150 mg. per cent, creatinine 16 mg. per cent, icterus index 17, and cephalin flocculation 4 plus in forty-eight hours, on April 11. Intravenous fluids, maintained at about 1,500 cc. daily until that time, were reduced, but the patient continued to become more cyanotic, respirations became more labored and the patient rapidly expired April 11, 1951, at 1:50 p.m.

Autopsy Findings: The autopsy was performed approximately one and one half hours after death; eight days following initial exposure to carbon tetrachloride.

The body was found to be cyanotic. A marked pulmonary edema with hydrothorax was present. Marked hepatic centrilobular necrosis and marked nephrosis were present. Traces of carbon tetrachloride were demonstrated in samples of liver and brain.

CASE DISCUSSION

Definite history of exposure to high concentrations of carbon tetrachloride for four hours on each of two successive days, abdominal cramps and oliguria was given.

On admission to the hospital three days following initial exposure, the patient was acutely ill with symptoms and signs of hepatic and renal insufficiency followed by pulmonary edema.

Case 1 by courtesy of Drs. S. F. White and M. J. Mueller, Department of Urology and Internal Medicine, Research Hospital, Kansas City, Missouri.

Fluids were forced intravenously on admission to the hospital and continued to be administered in excess of daily requirements in view of complete anuria.

Autopsy findings of centrilobular necrosis in the liver and of a typical lower nephron nephrosis in the kidneys were felt to be compatible with carbon tetrachloride intoxication complicated by pulmonary edema due to excessive administration of parenteral fluids.

Case 2. A white male, aged 27 years, was admitted with the chief complaint of epistaxis. He gave a history of a single massive exposure to carbon tetrachloride fumes ten days previous to admission while working in the bottom of a large vat cleaning it with pure carbon tetrachloride. The patient stated that he ingested a large amount of alcohol during the operation. He became quite dizzy and had to quit work for the day but attributed this to the alcohol rather than to the carbon tetrachloride. He did not feel well the following day and by the third day following exposure he began noticing nausea, vomiting, epigastric discomfort and abdominal distention, stating that his eyes became "bloodshot." He continued to rest at home unable to take much in the way of food or fluids until two days previous to admission when his nose began to bleed. He consulted his physician and was hospitalized.

Physical examination revealed temperature 99.2 F., pulse 84, respiration 20 and blood pressure 150/110. Blood dripped from the external nares and bilateral subconjunctival hemorrhages were present. The liver was palpated three finger breadths below the right costal margin and was quite tender to palpation. A 2 plus pitting edema of both ankles was present.

On admission the urine was 4 plus positive for albumin and contained gross blood; red blood count 3,130,000; white blood count 11,200; hemoglobin 8.5 grams, or 54.8 per cent; neutrophils 64; lymphocytes 31 and eosinophils 5. Icterus index was 6 units, total protein 4.1, albumin 2.68, globulin 1.42, A/G ratio 1.5. Blood was drawn for cephalin flocculation and was reported 4 plus positive at forty-eight hours. Three days following admission the nonprotein nitrogen was 216 mg. per cent and the creatinine 20.4 mg. per cent. An electrocardiogram showed "minimal evidence of myocardial insufficiency on the basis of flattening of all T-waves." Fuoroscopic examination of the chest and upper gastrointestinal tract showed only a vague duodenal deformity suggestive of peptic ulceration. A barium enema was negative. The patient was placed on symptomatic and supportive care. His nose was packed as an emergency measure and he received large doses of vitamin K parenterally as well as fresh whole blood transfusion. A salt free, high carbohydrate diet was ordered and the patient watched closely for oliguria. Paradoxically a diuresis of from 2 to 3 liters per day began shortly after admission and despite the high nonprotein nitrogen and creatinine levels, the patient did not appear toxic and was semi-ambulatory. The epistaxis was controlled, the patient continued to improve, received supplementary electrolytes in the form of sodium and potassium chloride by mouth and glucose in saline parenterally. The nonprotein nitrogen dropped to 54 mg. per cent ten days following admission, the urine showed only a trace of albumin on dismissal after twelve days hospitalization, and subsequently became entirely clear.

Case 2 by courtesy of Drs. M. V. Laing and P. R. Carpenter, St. Margaret's Hospital, Kansas City, Kansas.

CASE DISCUSSION

Despite an obviously heavy dose of carbon tetrachloride, this patient got well. His nephrotic phase was evidently passed at home without benefit of parenteral fluids. Retrospective questioning of the patient yielded the information that he had passed little urine during the five day interval previous to admission.

A laboratory survey of the hemostatic mechanism was not obtained, the cause of his epistaxis therefore remains conjectural.

Case 3. This 44 year old white male chemical worker inhaled the direct fumes from a leaking pipe containing carbon tetrachloride for from five to ten minutes. He became dizzy, noticed abdominal cramps, severe headache, nausea, vomiting and injection of the sclerae. He was admitted to the hospital three days following exposure. His nonprotein nitrogen on admission was 41.5 mg. per cent. He showed less than 5 per cent retention of bromsulfalein in one hour. Multiple doses of calcium gluconate were given intravenously together with hypertonic glucose. Oliguria and jaundice did not appear. The nonprotein nitrogen subsided to normal levels and the patient was dismissed after five days' hospitalization.

Case 4. A 42 year old white male was overcome while using a pyrene fire extinguisher to extinguish fires occuring from time to time as he continued to use a welding torch under the cowl of an automobile. He was exposed for thirty minutes to the fumes, became drowsy and then comatose and was admitted to the hospital with shallow, infrequent respirations. Pulse and blood pressure were normal on admission. All laboratory examinations were within normal limits. An oxygen-carbon dioxide mixture was administered by mask as an emergency measure. The patient made an uneventful recovery and was dismissed four days following admission.

DISCUSSION OF CASES 3 AND 4

Both cases illustrate brief exposure toxic reactions uncomplicated by hepatic or renal damage to any significant degree. Case 3 had gastro-intestinal symptoms, while case 4 predominantly had cerebral depression. The question of phosgene formation would arise in the latter case.

SUMMARY AND CONCLUSIONS

1. A fatal case, three nonfatal cases and brief references to 596 cases from the literature are reported.

2. The subject of carbon tetrachloride poisoning is treated in the classical manner from the standpoints of incidence, mortality, etiology and susceptibility, symptoms and signs, pathogenesis, pathology, diagnosis, treatment, prophylaxis and prognosis.

Case 3 by courtesy of Dr. J. R. Whiteman, St. Mary's Hospital, Kansas City.
Case 4 by courtesy of Dr. B. L. Meyers, St. Mary's Hospital, Kansas City.

3. Emphasis is placed on the toxic properties of the chemical, the greater than generally believed incidence of cases, and newer aspects of the treatment of victims.

Holmes and 23rd Sts.

BIBLIOGRAPHY

1. Abbott, G. A., and Miller, M. J.: Carbon Tetrachloride Poisoning—a Report on Ten Cases at the U. S. Marine Hospital, Seattle, Washington, Since 1937, Pub. Health Rep. **63**:1619-1624 (Dec. 10) 1948.
2. Allison, B. R.: The Treatment of Acute Carbon Tetrachloride Poisoning with a Report of Two Cases, Ann. Int. Med. **16**:81-93 (January) 1942.
3. Andrews, W. H. F., and Macgraith, B. G.: The Pathogenesis of the Liver Lesion Due to the Administration of Carbon Tetrachloride, Ann. Trop. Med. **42**:95-100 (April) 1948.
4. Ashe, W. F., and Sailer, S.: Fatal Uremia Following a Single Exposure to Carbon Tetrachloride Fumes, Ohio State M.J. **38**:553-555 (June) 1942.
5. Clinton, Marshall: Renal Injury Following Exposure to Carbon Tetrachloride, New England J. Med. **237**:183-185 (Aug. 7) 1947.
6. Conaway, H. B., and Hoven, F.: Electrocardiographic Changes in Carbon Tetrachloride Poisoning, U. S. Naval Med. Bull. **46**:593-595 (April) 1946.
7. Corcoran, A. C.; Taylor, R. D., and Page, I. H.: Acute Toxic Nephrosis: A Clinical and Laboratory Study Based on a Case of Carbon Tetrachloride Poisoning, J.A.M.A. **123**:81-85 (Sept. 11) 1943.
8. Dillenberg, S. M., and Thompson, C. M.: Carbon Tetrachloride Poisoning: A Report of 20 Cases with One Death, Mil. Surgeon **97**:39-44 (July) 1945.
9. Easton, W. H.: Carbon Tetrachloride in Industrial Hygiene, Indust. Med. **12**:1-3 (January) 1943.
10. Eddy, J. H.: Carbon Tetrachloride Poisoning in Industry, Indust. Med. **14**:283-285 (April) 1945.
11. Elkins, H. B.: Maximal Allowable Concentrations. I. Carbon Tetrachloride, J. Indust. Hyg. & Toxicol. **24**:233-235 (October) 1942.
12. Farrell, C. L., and Senseman, L. A.: Carbon Tetrachloride Polyneuritis, A Case Report, Rhode Island M.J. **27**:334 (July) 1944.
13. Farrier, R. M., and Smith, R. H.: Carbon Tetrachloride Nephrosis, A Frequently Undiagnosed Cause of Death, J.A.M.A. **143**:965-967 (July 15) 1950.
14. Forbes, J. R.: Carbon Tetrachloride Nephrosis, Lancet **6323**:590-592 (Nov. 4) 1944.
15. Foxell, A. W. H.: Three Cases of Carbon Tetrachloride Poisoning with One Fatality, Brit. M.J. **1**:397 (Feb. 24) 1951.
16. Friedberg, C. K.: Congestive Heart Failure of Renal Origin, Pathogenesis and treatment in Four Cases of Carbon Tetrachloride Nephrosis, Am. J. Med. **9**:164-174 (August) 1950.
17. Gocher, T. E. P.: Carbon Tetrachloride Poisoning, Northwest Med. **43**:228-230 (August) 1944.
18. Gray, Irving: Carbon Tetrachloride Poisoning, Report of 7 Cases with 2 Deaths, New York State J. Med. **47**:2311-2315, 1947.
19. Glynn, L. E.: Hepatic Circulation in Liver Poisoning, Clin. Science **6**:235-241 (October) 1946.
20. Hagen, W. S.: Toxic Effects of Carbon Tetrachloride, Minnesota Med. **23**:715-718 (October) 1940.
21. Hammes, Ernest M., Jr.: Carbon Tetrachloride as an Industrial Hazard, J. Indust. Hyg. & Toxicol. **23**:112-117 (March) 1941.
22. Hoffman, I. L., and Grayson, R. R.: Carbon Tetrachloride Nephrosis, Report of Patient Rx'd Conservative, U. S. Armed Forces M.J. **2**:755-761 (May) 1951.
23. Jetter, W. W.: Chemical Injury, Anderson Textbook of Pathology, Chap. 7, pp. 167, St. Louis, C. V. Mosby Co., 1948.
24. Konwaler, B. E., and Noyes, C. B., Jr.: Carbon Tetrachloride Poisoning, Report of Cases, California & West. Med. **61**:16-20 (July) 1944.
25. Kugel, Victor H.: Acute Toxic Nephrosis in Carbon Tetrachloride Poinoning, J. Mt. Sinai Hosp. **12**:440-447 (May-June) 1945.
26. Kugel, V. H.: Management of Acute Toxic Nephrosis, Am. J. Med. **3**:188-205 (August) 1947.
27. Love, E. B., and Miller, A. A.: Fatal Poisoning by Inhalation of Carbon Tetrachloride, Lancet **1**:1306-1307 (June 16) 1951.
28. Martin, W. B.; Dyke, L. H.; Addington, F. L., and Snell, A. M.: Carbon Tetrachloride Poisoning: A Report of One case with Necropsy and One Fatal Case with Clinical Laboratory Studies, Ann. Int. Med. **25**:488-497 (September) 1946.
29. Massachusetts General Hospital Case Reports as edited by Mallory, T. B.: New Eng. J. Med. **238**:776-779 (May 27) 1948.
30. McCollister, D. D.; Beamer, W. H.; Atchison, G. J., and Spencer, H. C.: The Absorption Distribution and Elimination of Radioactive Carbon Tetrachloride by Monkeys Upon Exposure to Low Vapor Concentrations, J. Pharmacol. & Exper. Therap. **102**:112-124 (June) 1951.
31. McConnell, W. J., in Cecil & Loeb Textbook of Medicine, 8th Ed., "Diseases Due to Chemical Agents: Carbon Tetrachloride Poisoning" pp. 509-511, Philadelphia, W. B. Saunders Co. 1951.
32. McGee, C. J.: Lower Nephron Nephrosis: Carbon Tetrachloride Poisoning With a Report of Three Cases, Am. J.M. Sc. **218**:636-645 (December) 1949.
33. McGill, C. M.: Death and Illness from Use of Carbon Tetrachloride, Northwest Med. **45**:169-172 (March) 1946.
34. Melick, W. F.: Acute Toxic Nephrosis Due to Poisoning by Carbon Tetrachloride: A Case Report, J. Urol. **55**:342-347 (April) 1946.
35. Moon, Henry D.: The Pathology of Fatal Carbon Tetrachloride Poisoning with Special Reference to the Histogenesis of the Hepatic and Renal Lesions, Am. J. Path. **26**:1041-1051 (November) 1950.
36. Morgan, E. L.; Wyatt, J. P., and Sutherland, R. B.: An Episode of Carbon Tetrachloride Poisoning with Renal Complications, Canadian M.A.J. **60**:145-150 (February) 1949.
37. Norwood, W. D.; Fuqua, P. A., and Scudder, B. C.: Carbon Tetrachloride Poisoning, More Regulation, More Education Needed, Arch. Ind. Hyg. & Occupat. Med. **1**:90-100 (January) 1950.
38. Odell, H. M.; Ferris, D. P.; Pearson, C. C.; Baggenstoss, A. H., and Snell, A. M.: Seminar on the Treatment of Acute Renal Insufficiency Particularly That Due to Carbon Tetrachloride by Peritoneal Lavage, Proc. Staff Meet. Mayo Clin. **22**:305-330 (Aug. 6) 1947.
39. Partonheimer, R. C., and Citron, D. S.: Practical Control of Fluid and Electrolyte Balance in Carbon Tetrachloride Nephrosis, Arch. Int. Med. **89**:216-233, 1952.
40. Perry, W. J.: Carbon Tetrachloride Poisoning: A Report of 88 Cases, Army Med. Bull. **64**:70-75 (October) 1942.
41. Prag, J. J.: Carbon Tetrachloride Poisoning by Inhalation, South African M.J. **25**:351-352 (May 28) 1951.
42. Quadland, H. P.: Reports of Occupational Injuries Attributed to Volatile Solvents—A Study of the Literature, Int. Med. **12**:734-737, 821-828 (Nov. and Dec.) 1943.
43. Rehner, John Jr.: Esso Laboratories, Standard Oil Development Co., Linden, New Jersey. Personal Communication.
44. Richter, M. L.: The Effect of the Administration of Carbon Tetrachloride to Rats on Certain Reactions of the Liver in Vitro, J. Pharmacol. & Exper. Therap. **102**:94-97 (June) 1951.
45. Safety Research Institute: Information Circular referred to the Council on Industrial Health of A.M.A. "The Recognition and Treatment of Carbon Tetrachloride Poisoning," J.A.M.A. **132**:786-787 (Nov. 30) 1946.
46. Sherman, S. R., and Binder, C. F.: Hazards of Carbon Tetrachloride in Present Day Use, U. S. Nav. Med. Bull. **43**:590-599 (September) 1944.
47. Simon, M. A.: Acute Toxic Nephritis Due to Inhalation of Carbon Tetrachloride Fumes, Canadian M.A.J. **41**:580-583 (December) 1939.
48. Sirota, J. H., and Warmbrand, H.: Carbon Tetrachloride Poisoning in Man I. The Mechanism of Renal Failure and Recovery, J. Clin. Invest. **2**:1412-1422 (November) 1949.
49. Smetana, Hans: Nephrosis Due to Carbon Tetrachloride, Arch. Int. Med. **63**:760-777 (April) 1939.
50. Smith, A. R.: Duodenal Ulcer Following Exposure to Carbon Tetrachloride—Report of Two Cases, J. Indust. Hyg. & Toxicol. **29**:134-135 (March) 1947.
51. Smith, A. R.: Optic Atrophy Following Inhalation of Carbon Tetrachloride, Arch. Indust. Hyg. & Occupat. Med. **1**:348-351 (March) 1950.
52. Spain, D. M., and Frey, Andrew: The Late Recovery of Chlorinated Hydrocarbons (Carbon Tetrachloride) From Postmortem Tissue, Am. J. Clin. Path. **21**:558-560 (June) 1951.
53. Stobbe, G. D.: Fatal Renal Disease in Carbon Tetrachloride Poisoning, Ohio State M.J. **43**:1245-1247 (December) 1947.
54. Strouse, C. D.: Carbon Tetrachloride Intoxication, Calif. Med. **74**:269-272 (April) 1951.
55. U. S. Dept. Labor: Occupational Hazards and Diagnostic Signs,—Bull. No. 41, 1941.
56. Weber, I.: Recovery of Carbon Tetrachloride from Tissue, J. Lab. & Clin. Med. **26**:719-722 (January) 1941.
57. Woods, W. W.: The Changes in the Kidneys in Carbon Tetrachloride Poinoning and Their Resemblance to Those in the "Crush Syndrome," J. Path. & Bact. **58**:767-773 (October) 1946.

BOOK REVIEW

HANDBOOK OF NUTRITION (Second Edition) Prepared under the auspices of the Council on Foods and Nutrition of the American Medical Association. Publishers, The Country Life Press Corp., Garden City, New York. Price $4.50.

This book on nutrition is quite complete and comprehensive. The nutritional needs in health from infancy to old age are splendidly presented; also, the nutritional needs in illness and disease.

Every internist should have a copy of this book. It will aid him greatly in his general practice as well as in preventive medicine. H. W. S.

Postgraduate Review

PANCREATIC INSUFFICIENCY

THEODORE L. BRYAN, M.D.
ST. LOUIS
MELVIN A. CASBERG, M.D.
WASHINGTON, D. C.
AND
WILLIAM A. KNIGHT, JR., M.D.
ST. LOUIS

Pancreatic fibrosis with the associated signs and symptoms attributable to insufficiency of the pancreatic hormones constitutes a rather typical clinical picture in the far advanced case.[11, 22] With lesser degrees of involvement, the clinical diagnosis becomes increasingly difficult. Despite the fact that the typical case presents certain features which should lead one to suspect the pancreas as the primary site of the disease process, the clinician often fails to make the diagnosis until relatively late. This failure may be due to the rarity of the condition, general unfamiliarity with the syndrome, lack of diagnostic laboratory studies or inability to interpret the tests. The following cases were studied to demonstrate the clinical picture, the value of repeated serum diastase determinations and the prostigmine diastase test in the diagnosis of pancreatic insufficiency in relationship to other tests of pancreatic function and structural changes.

Five patients have been followed at St. Louis City hospital, all presenting the picture of pancreatic insufficiency. Histologic confirmation of the diagnosis of pancreatic fibrosis is available in two cases and these will be presented in detail. Also, the results of partial pancreatectomy in one patient will be reported.

Methods.—In this study a complete history and physical examination was done together with a gastrointestinal study. Laboratory studies included repeated fasting serum diastase determinations and prostigmine diastase test, which is done by giving 1 mg. of prostigmine methyl sulfate intramuscularly and obtaining serum for diastase determinations every thirty minutes for two hours after the method previously described by Knight and Muether.[15] Prior to the injection of prostigmine a lavage tube was passed into the duodenum with the aid of fluoroscopy and a second lavage tube was passed into the stomach. Constant aspiration of the tubes was maintained during the test period. The duodenal contents were collected in separate thirty minute fractions during the test. The diastase values were determined by the method of Somogyi.[23] Lipase was determined by the method of Goldstein, Epstein and Roe. Tryptic activity was also determined but will not be reported because of insufficient control material to determine normal values.

REPORT OF CASES

L. S., (46,247), a 48 year old white female was admitted to St. Louis City Hospital on October 11, 1950, for the fourth and final time because of chronic recurring gastrointestinal symptoms and advanced pulmonary tuberculosis.

The patient was first seen in 1940 with severe diarrhea and cramping abdominal pain, poor appetite and a 10 pound weight loss. Physical examination and laboratory studies failed to reveal the nature of her illness and she was discharged as improved. X-ray examination of the chest at that time was negative and fasting blood sugar was 85 mg. per cent.

The patient failed to return for follow-up studies or treatment until 1945 when she was examined because of a persistence of diarrhea, loss of appetite and weight, and postprandial epigastric distress relieved by food and alkalies. Physical examination was normal but barium meal showed a spastic duodenal bulb and areas of calcification across the area of the first lumbar vertebra. Laboratory studies revealed a fasting serum diastase level of 22 Somogyi units and a diabetic glucose tolerance curve. At that time the diagnosis of pancreatic insufficiency should have been suspected, and the true nature of her illness and incapacitating diarrhea determined. Treatment at that time consisted of antispasmodics, alkalies, diabetic diet and sedation.

In February 1949 she was again admitted to the hospital because of diarrhea, the stools being described as loose, foul smelling and copious, weight loss from 110 to 84 pounds, anorexia, nausea and vomiting, polydipsia, polyphagia and polyuria. Physical examination and laboratory studies were interpreted as showing uncontrolled diabetes in acidosis, for which she was treated and discharged improved. She required a fairly rigid diet and 45 units of insulin per day to control her diabetes.

She was readmitted to the hospital in December 1949 with pneumonia and gastrointestinal symptoms. Physical examination revealed an emaciated white female weighing 77 pounds, low grade fever and signs of an inflammatory process involving the left lung field. She was treated with antibiotics and the acute process in the left lower lobe cleared, but the process in the left upper lobe progressed to cavitation and acid-fast bacilli were isolated from her sputum. At that time the true nature of her gastrointestinal symptoms was suspected and laboratory studies revealed findings compatible with extensive pancreatic fibrosis (see table 1).

Treatment was symptomatic and supportive. She was given large doses of Entozyme,* supplemented with detergents. On this regime the patient felt better. The stools became more infrequent, but the wet weight of the stools averaged 600 grams per

(T. L. B.) former Senior Resident, St. Louis University Medical Service, St. Louis City Hospital. (M. A. C.) former Director, St. Louis University Staff, St. Louis City Hospital. (W. A. K.) Director, St. Louis University Medical Service, St. Louis City Hospital.

* Entozyme supplied by A. H. Robins, Richmond, Virginia.

Table 1. *Laboratory Studies on L.S.*

	Dec. 1940	Sept. to Dec. 1945	Feb. to April 1949	Dec. 1949 to March 1950
Rbc	4.46	4.59	4.7	4.7
Hb. /gms.		14.5	14.0	13.2
Wbc	13,200	9,350	14,000	10,400—7,550
Diff. Count	Sl. left shift	Normal	Sl. left shift	Left shift—normal
Urine analysis	Neg.	Neg.	Sugar sl. positive	Neg.
BUN /mg. %	14	124— Diabetic curve	12	7
Blood Sugar /mg. %	85		250—350	300
Serum Proteins				
Total /gms. %			6.90	6.70
Alb. /gms. %			4.40	3.33
Glob. /gms. %			2.50	3.37
C.C.Floc. 24/48 hr.			3+	3+
T.T. /units			4.6	5.3
T.F. /units			4.2	5.0
B.S.P. /30 min.				3%
Alk. Phos. (Bodansky units)			9.0	20.4 - 12.1 - 6.5
Acid Phos.				0.8
Diastase (Somogyi units)		22		24
Prostigmine Diastase				24, 24, 24, 23, 24
Prothrombin				92%
Serum Bilirubin				
Total /mg. %			1.3 — 2.6	1.5
Direct /mg. %			0.2 — 0.1	0.3
Calcium /mg. %				9.0 - 10.2
Phosphorus /mg. %				2.8 - 3.5
Cholesterol				
Total /mg. %			136	125 - 200
Esters /mg. %			86	76 - 130
Agglutinations	Neg.		Neg.	Neg.
Kahn	Neg.	Neg.	Neg.	Neg.
BMR	+5		+4, +18, —2,	+38, +21, +32
Stool				Greasy, lt. yellow gray, foul-smelling
Culture	No pathogens		No Pathogens	No pathogens
Sudan III			Pos.	Slightly positive
24-hr. wet wt. /gm.				525 to 870
X-rays	Thickened apical pleura	D.B. spastic Pancreatic calculi	Pulmonary empysema	Chest— Cavitation L.U.L. Barium meal— normal Small bowel series— deficiency pattern Pancreatic lithiasis
Duodenal Drainage				Thick, viscid fluid Amylase 11,200 u/100 cc. Tryptic activity +1:8

twenty-four hours. Free fat was still present, but the stools had a less offensive odor. The diabetes became more stable and easier to control. Because of the tuberculosis sanitarium care was recommended but the patient refused and left the hospital.

She was readmitted on October 11, 1950, and died seven days later, on October 18, 1950, with far advanced pulmonary tuberculosis.

Postmortem examination revealed emaciation, far advanced pulmonary tuberculosis, a fibrotic pancreas with ductal calculi (fig. 1), interstitial fibrosis of the liver and a grossly normal small bowel.

M. F., (94,830), a 48 year old white female was first admitted to St. Louis City Hospital in July 1950 because of diabetic acidosis. In 1943 she was found to have glycosuria, which was controlled by diet alone. In 1947 she was hospitalized at another hospital because of mild anorexia, nausea, 40 pound weight loss and steatorrhea. Physical examination revealed an emaciated, poorly nourished white female with cellulitis of the left great toe. Laboratory studies were consistent with uncontrolled diabetes. A normal serum amylase value was recorded. Her hospital course was uneventful and she was discharged on a diabetic diet and 45 units of insulin per day.

The diagnoses considered at that time were diabetes mellitus, diarrhea of undetermined cause and idiopathic steatorrhea.

She was readmitted to the hospital in 1949 because of mental depression and peripheral neuritis. She had gained no weight despite a tremendous food intake and she was still having many voluminous, fatty stools each day. After attempts at diabetic regulation, she was discharged unimproved. She was readmitted two and one half months later, in September 1949, with a recurrence of these symptoms and pain in the right shoulder, following trauma. Physical examination revealed emaciation, a red tongue and moderate retinal arteriosclerosis. Laboratory and x-ray studies revealed pancreatic lithiasis, diabetes mellitus, a serum amylase of less than 50 Somogyi units, serum calcium 7.6 mg. per cent, serum phosphorus 2.7 mg. per cent, and stools containing increased amounts of fat. Hospital course was complicated by a mild pneumonitis, urinary tract infection and a subscapular abscess. She was treated with antibiotics, diet, insulin, tween 80, pancreatin and supplemental vitamins. She was diagnosed as having diabetic neuropathy in addition to the previous diagnoses.

She was admitted to St. Louis City Hospital in July 1950 complaining of persistent diarrhea, nausea,

vomiting, smothering spells . . . a large carbuncle on her neck. She had diabetic acidosis. Physical examination confirmed the diabetic acidosis, mild diabetic retinopathy and a large carbuncle of the back. Laboratory studies (tables 2 and 3) on this admission revealed findings consistent with a diabetes mellitus, and pancreatic acinar atrophy as evidenced by the repeated low serum diastase levels, low flat prostigmine diastase test and stools of increased weight, containing undigested proteins and fat.

The diabetic acidosis was controlled by administration of electrolytes, fluids, insulin, diet, antibiotics and surgical drainage of the carbuncle. In an attempt to improve her nutrition and gain better diabetic regulation, the diet and insulin were supplemented with Entozyme and a detergent. The addition of Entozyme to the therapeutic regime resulted in a definite decrease in the number and weight of the stools. Because of recurring bouts of anorexia, nausea and vomiting, her diabetes was difficult to control.

Since these symptoms were thought to result from recurring attacks of pancreatitis, a partial pancreatectomy was done. Her postoperative course was uneventful and her subsequent course has shown definite improvement.

Histologic sections of the pancreas at the time of operation showed extreme pancreatic fibrosis, calculi and ductal dilatation (fig. 3). The liver sections were interpreted as revealing pericholangitis (fig. 4). A section of the small bowel was interpreted as histologically normal (fig. 5).

Readmission to the hospital in July 1951 for study revealed the patient to be considerably improved. Her weight had remained constant but she had been more active. On a general diet, 15 units of protamine zinc insulin daily had been necessary and the steatorrhea was no longer a problem. The patient had had one stool per day which had averaged 150 to 200 grams wet weight per twenty-four hours. On microscopic examination, fat and undigested protein fibers were not noted. The repeated serum diastase values, which for several years prior to operation were consistently lower than 50 units, measured 70 to 160 units.

DISCUSSION

Pancreatic fibrosis may be an incidental finding at autopsy.[18] In such cases, review of the history will usually fail to elicit any symptoms referable to pancreatic disease or pancreatic insufficiency. In cholecystitis Judd[12] has shown that pancreatitis exists in 26.8 per cent of the cases; however, in view of the high cure rate quoted after cholecystectomy it is unlikely that significant pancreatic insufficiency develops in these cases. In the so-

Table 2. *Laboratory Studies on M.F.*

	1947	Sept. 1949	July 1950 to Dec. 1950
Rbc	4.02	3.5	4.0
Hd. /gms. %	13	11	12.4
Wbc	13,400	13,900	14,950
Diff.		Sl. left shift	Sl. left shift
Urine			
Alb.	Neg.	Trace	Neg.
Sugar	Pos.	Pos.	Pos.
Acetone		Pos.	Pos.
Micro	Neg.	Occ. Wbc & Rbc	Neg.
N.P.N. /mg. %	18	28	
BUN /mg. %			35
Blood Sugar /mg. %	88		200
Serum Proteins			
Total /gms. %	5.8	5.6	5.70
Alb. /gms. %		2.8	3.64
Glob. /gms. %		2.8	2.06
C.C. Floc. 24/48 hr.		1+	1+
T.T. /units		1.2	1.4
Alk. Phos. /B.U.	3		2.3
Diastase (Somogyi units)	200 <	50 <	31 - 48
Prostigmine Diastase			44, 44, 44, 48, 38
Icterus Index /units		5	
Serum Bilirubin			
Total /mg. %			0.2
Direct /mg. %			0.1
Calcium /mg. %	8.3	7.6	8.3
Phosphorus /mg. %	4.2	2.7	
Cholesterol			
Total /mg. %			194
Esters /mg. %			82
Kahn	Neg.	Neg.	Neg.
E.K.G.		Normal	Normal
Stool			
Culture	No pathogens	No pathogens	No pathogens
Sudan III	Pos.	Pos.	Pos.
Meat Fibers			Pos.
24 hr. wet wt. /gms.	Increased	Increased	566 to 1500
Appearance			Greasy, light yellow, foul-smelling
X-rays		Pancreatic lithiasis Compression of 11th thoracic vertebra	Pancreatic lithiasis Small bowel series— puddling and hypomotility Chest— scarring in right infraclavicular area

called postcholecystectomy syndrome chronic pancreatitis has been implicated as a possible factor, but seems rather unlikely in view of the duodenal drainage studies of Dreiling.[9] In cirrhosis of the liver there is an increased incidence of pancreatic fibrosis and this is also apparent in chronic alcoholics.[3, 4, 13] It is our opinion that advanced pancreatic fibrosis may occur without definite known precipitating causes and also that the incidence is greater than the literature would lead one to suspect.

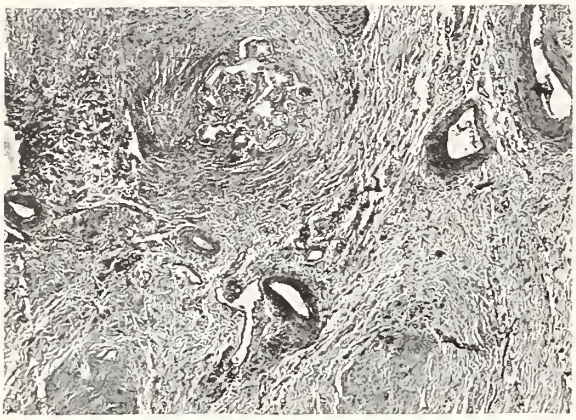


Fig. 1. Section of pancreas showing ductal calculi, interstitial fibrosis, distortion of normal architacture pattern and a marked decrease in the acinar and islet tissue.

Pancreatic insufficiency is associated with marked pancreatic fibrosis, particularly of the acinar tissue. The islets of Langerhans may also undergo structural changes as manifested by diabetes mellitus. However, in general they are not as susceptible as the acini. Calcification may or may not be found within the pancreas. When noted, it may be of two types—calcification within the parenchyma of the gland or calculi within the ducts.[17] The latter type is more frequently encountered. The etiology of the calcification remains in doubt, although the role of inflammation or infection has been strongly implicated. When calculi are present within the ducts, characteristic changes occur within the gland.[19] Ductal dilatation develops and acinar atrophy occurs. Later, marked fibrosis of the gland is noted. Similar changes have been produced experimentally by ligation of the pancreatic ducts. Calculi within the ducts are not sufficient to explain all of the changes (assuming that calculi, if present, would be radio opaque), in view of the fact that one of these cases does not show roentgen evidence of pancreatic calculi. Therefore, it seems likely that the process initiating the calcification may also be responsible for the acinar atrophy and fibrosis of the gland. Repeated attacks of chronic recurring pancreatitis may be a factor in pancreatic fibrosis.

The clinical picture of pancreatic insufficiency is variable and is attributed to a deficiency of pancreatic secretions. Intermittent bouts of anorexia, nausea and vomiting may or may not be associated with pain. Pain was not a feature in our cases, but a review of the literature[11] reveals that pain, when present, is located in the epigastrium, is sometimes colicky in nature and is referred through to the back or to the left lower rib margin. The pain may or may not be related to meals and is occasionally brought on by the ingestion of food or alcohol. These symptoms could be secondary to mild recurring attacks of pancreatitis, which may not be of such severity as to cause the patient to seek medical aid early in the course of the disease process. Between bouts of anorexia the patient may have a ravenous appetite and consume more than 4,000 calories per day in an attempt to maintain nutrition.

Other digestive disturbances are noted and a fatty diarrhea occurs in approximately 50 per cent of the cases,[22] being present in three of our five patients. The patients describe the stools as loose, four-smelling, greasy, light brown to gray in color. Bowel movements average from four to fifteen per day. It is curious that the bowel movements and the total stool production may vary widely from day to day and from week to week without apparent relation to food intake or other gastrointestinal disturbances indicating that other factors are also active in determining the frequency, type and character of the stool. Gross and microscopic examinations of the small bowel in two of these patients revealed normal structure, but one wonders whether there may not be an associated enzyme disturbance. Certainly the problem of steatorrhea is not settled and further investigation is warranted.

Diabetes mellitus is present in this condition in about one third of the cases in large series,[11, 22] but was noted in all of our patients. Insulin in doses of 50 units or less per day is apparently sufficient to achieve fair diabetic control. However, because of variation in daily dietary intake

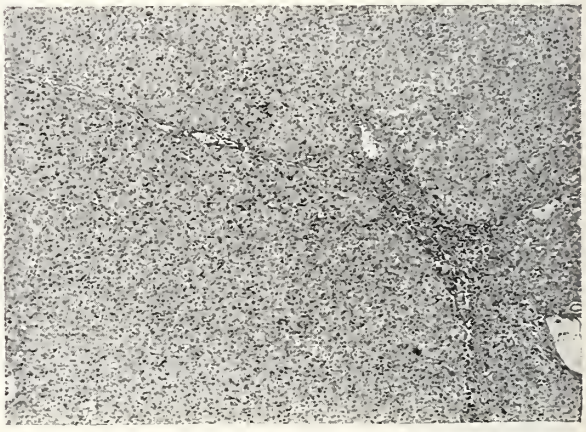


Fig. 2. Section of liver, showing interstitial fibrosis.

and intestinal absorption, good control is difficult to achieve.

Pulmonary tuberculosis has been noted to occur more frequently in these cases, but probably occurs with an increased incidence secondary to the diabetes mellitus and general poor nutritional state rather than as a part of the disease process.[1] Active pulmonary tuberculosis was noted at some time in two of our five cases, and x-ray evidence of fibrotic minimal lesions was noted in two additional cases.

Gradual weight loss and weakness is noted particularly in the cases in which steatorrhea is present. This may be quite marked in untreated cases. Weight and nutrition are difficult to maintain in these patients.

Jaundice has been noted in about one fourth of the cases[11] and was present in one of our series. A fatty liver has also been described.[1, 14] Cirrhosis of the liver has been noted with an increased incidence in this condition.[6, 14, 26]

Physical examination fails to reveal any consistent findings indicative of the disease. However, in general, nutrition is poor. In laboratory findings, no diagnostic change is noted in the blood count, although a slight tendency to anemia may be present. Urinalysis is not significant except when glycosuria is present secondary to impaired carbohydrate metabolism.

The serum diastase is characteristically low in this condition. All five of these patients had persistent diastase values below 50 Somogyi units. In none of these cases was the liver disease of sufficient magnitude to account for this marked lowering of the serum diastase. Experimentally,

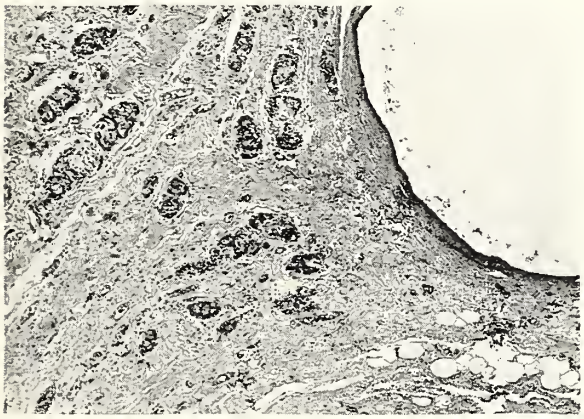


Fig. 3. Section of pancreas showing extreme pancreatic fibrosis, calculi, ductal dilatation, distortion of architecture pattern and a decrease in acinar and islet tissue.

it has been shown that ligation of the pancreatic duct will be followed by an initial elevation of the serum diastase.[21] However, within a few weeks as acinar atrophy occurs the diastase progressively falls to consistently low values in the range of 20 to 50 Somogyi units. This same type of atrophy has been observed in man secondary to carcinoma of the head of the pancreas with pancreatic duct obstruction.[15] It has also been noted in hemochromatosis secondary to marked fibrosis and in pancreatic cysts with complete destruction of the gland. It is the opinion of the authors that the test represents a valuable adjunct to the

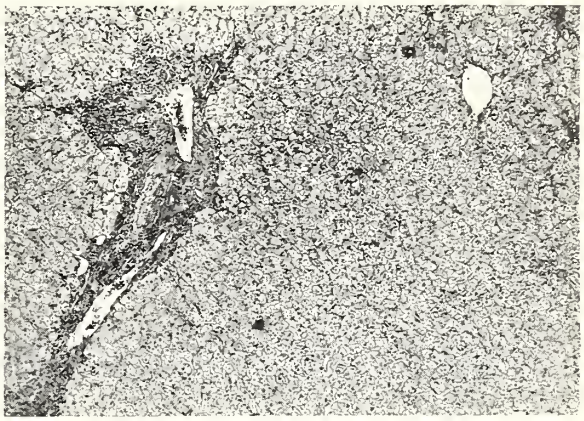


Fig. 4. Section of liver showing mild pericholangitic infiltration with inflammatory cells.

diagnosis of pancreatic insufficiency and should be used in screening patients in whom the diagnosis is suspected. If the serum diastase value is low it should be repeated for confirmation over a one to four weeks' interval because it has been observed that following acute pancreatitis in occasional instances the serum diastase may be temporarily depressed below normal. In addition, serious liver disease must be ruled out by appropriate tests because in advanced liver failure the serum diastase may be below normal limits.[10]

The prostigmine diastase test is also of value in demonstrating pancreatic acinar atrophy. The serum diastase values obtained in these instances show no changes to prostigmine stimulation and the values obtained are lower than the normal and are constant in all specimens. This test thus aids in differentiating pancreatic insufficiency (which may be temporary or permanent) from the normal; also from pancreatitis and ductal obstruction without associated atrophy.[15]

Duodenal drainage together with various pancreatic secretory stimulants has been determined by many investigators.[2, 5, 16] In general, secretin has been most widely used as the stimulant. The volume of secretion, bicarbonate production and total enzymes produced are lowered in this condition. However, duodenal drainage is difficult and time consuming for the patient, the physician and the laboratory technician. Results show a high degree of variation in control subjects and consequently evaluation is not always easy unless almost complete atrophy of the gland is present.

Duodenal drainage with prostigmine stimulation was carried out in three of the patients observed and characteristic reduction of pancreatic secretion and enzyme production was noted (tables

1, 2 and 3). The same conclusions may be obtained by the interpretation of the serum diastase values following prostigmine stimulation. The latter is recommended because of its simplicity.

With marked steatorrhea, the serum calcium values may be low and occasional associated

Fig. 5. Section of small bowel histologically normal.

tetany noted. Poor calcium absorption is attributed to deficient vitamin D absorption and formation of calcium soaps in the gastrointestinal tract. Low calcium values were noted in one of our five patients. Alkaline phosphates were determined in all patients, but no diagnostic significance could be attached to values obtained.

The blood sugar is elevated in those cases manifesting diabetes mellitus and the oral glucose tolerance test reveals a typical diabetic curve with no apparent delay in absorption.

Roentgen studies will reveal calcification of the pancreas in most of the cases if a flat plate of the abdomen is taken. This procedure is useful in picking up suspected cases and should be part of the routine work-up in these patients because of its simplicity and the high degree of positive information it affords. Calcification was noted in four out of five cases in this series.

Roentgen study of the small bowel by means of a barium meal may reveal abnormal motor function as evidenced by fragmentation, segmentation and puddling of the barium column. This was present in two of the three cases examined.

If calcium absorption has been defective to a sufficient degree, skeletal osteomalacia may be noted. However, it was not demonstrated in the present series of cases.

Stool examination contributes valuable information in these patients because 50 per cent of them will have abnormal amounts of fat present in the stool, readily checked with Sudan III stain. In addition, the stool should be collected serially for three days in twenty-four-hour fractions and wet weight determined. The wet weight of the stool for twenty-four hours should not exceed 200 grams. The wet weight of our series varies from 300 grams to 1,500 grams. In our opinion, determination of enzymes in the stool is not of sufficient accuracy to warrant the effort involved.

THERAPY

In the conservative or medical management of this condition an attempt is made to replace the diminished pancreatic secretion. The prime problem is the diabetes mellitus when present. Insulin in doses of 50 units or less per day is apparently sufficient to achieve fair diabetic control. However, because of variation in daily dietary intake and intestinal absorption, good control is difficult to achieve.

Partial pancreatectomy in one of our patients controlled the nausea and vomiting and made the diabetes more stable and easier to control. She was maintained on diet plus 15 units of insulin daily, whereas, prior to operation she required about 40 units daily.

Replacement of the external pancreatic secretion through the use of pancreatin or some other similar preparation will diminish the steatorrhea. The dose is variable within a rather wide range and can be arrived at only by a process of trial. The enzyme is best, given approximately thirty minutes after meals. Entozyme used in this study was given in doses of two to four tablets after meals. Detergents may prove of some value in helping to break down the fat globules. However, in the present series, trial in two cases was apparently without benefit to the patient.

Diet should be sufficient to maintain nutrition and control the diabetes. The character of stool

Table 3. *Duodenal Drainage—September 1, 1950*

	pH		Volume		Amylase (Somogyi units	
	*Control	Patient	Control	Patient	Control	Patient
Before Stimulation**	6.8	7.0	22 cc.	20 cc.	127,000	885
30 min.	6.7	7.5	51 cc.	18 cc.	31,000	300
60 min.	6.8	7.5	57 cc.	25 cc.	78,000	90
90 min.	6.6	6.0	55 cc.	46 cc.	30,000	90

* Average values from control subjects
** 1.0 mgm. Prostigmine methyl sulfate I.M.

should not influence one in the quantitative or qualitative selection of the diet.

Because of poor absorption of the fat soluble vitamins, supplemental vitamins may be required.

The value of surgery at present is uncertain. In the presence of recurring bouts of pain, various measures have been tried with different degrees of success. Relief from attacks has been described following thoracolumbar sympathectomies.[7] Partial and total pancreatectomies have also been beneficial.[25] Division of the sphincter of Oddi is useful.[8] In 1946 Whipple described five patients in whom partial or total pancreatectomy was performed.[24] In three patients the steatorrhea markedly improved and diabetic control was more easily achieved on smaller doses of insulin. In the one patient in this series submitted to operation, a partial pancreatectomy was done. Steatorrhea, anorexia and nausea disappeared and diabetic control was easier to maintain. The serum diastase values, which for years prior to operation were consistently below 50 units, now were within the limits of normal, 70 to 160 units. Although pain is the usual indication for operation, it was not a factor in the patient operated upon. Further experience with pancreatectomy in this syndrome may clarify the value of surgery, and aid in the further evaluation of the unexpected changes, particularly in the serum diastase values.

CONCLUSIONS

1. The syndrome of pancreatic insufficiency has been presented. Five cases have been reviewed and two cases have been presented in detail.
2. The laboratory studies, including the value of repeated blood diastases and the prostigmine diastase test as an aid in early detection of advanced pancreatic fibrosis, have been discussed.
3. The various aspects of medical and surgical management have been presented.

BIBLIOGRAPHY

1. Ackman, F. D., and Ross, A.: Pancreatic Lithiasis, Surg. Gynec. & Obst. **55**:90, 1932.
2. Agren, G., and Lagerlof H.: Pancreatic Secretion in Man after Intravenous Administration of Secretin, Acta Med. Scandinav. **90**:1, 1936.
3. Brockus, H. L.: Gastro-Enterology, Vol. III, 1944, W. B. Saunders, Philadelphia and London, p. 792.
4. Clark, E.: Pancreatitis in Acute and Chronic Alcoholism, Am. J. Digest. Dis. & Nutrition **9**:428, 1942.
5. Comfort, M. W., and Osterberg, A. E.: Pancreatic Secretion in Man after Stimulation with Secretin and Acetylbetamethylcholine Chloride. A Comparative Study, Arch. Int. Med. **66**:688, 1940.
6. Davies, J. N. P.: Kwashiorkor. Liver Injury, Ninth Conference. Hoffbauer, F. W., Editor Trans. 1951, Josiah Macy, Jr Foundation, New York, p. 154.
7. De Takats, G.; Walter, L., and Lasner, J.: Splanchnic Nerve Section for Pancreatic Pain, Ann. Surg. **131**:44, 1950.
8. Doubilet, H., and Mulholland, J. H.: Surgical Treatment of Calcification of the Pancreas, Ann. Surg. **132**:786, 1950.
9. Dreiling, D. A.: Studies of Pancreatic Function III. The Use of the Secretin Test in the Diagnosis of Patients with the Post-Cholecystectomy Syndrome, Gastroenterol. **16**:162, 1950.
10. Gray, S. H.; Probstein, J. H., and Heifetz, C. J.: Clinical Studies on Blood Diastase I. Low Blood Diastase as an Index of Impaired Hepatic Function, Arch. Int. Med. **67**:805, 1941.
11. Haggard, W. D., and Kirtley, J. A.: Pancreatic Calculi: A Review of Sixty-Five Operative and One Hundred Thirty-Nine Non-Operative Cases, Ann. Surg. **109**:809, 1939.
12. Judd, E. S.: Relationship of the Liver and the Pancreas to Infection of the Gallbladder, J. A. M. A. **77**:197, 1921.
13. Kirshbaum, J. D., and Shure, N.: Alcoholic Cirrhosis of the Liver. A Clinical and Pathologic Study of 356 Fatal Cases Selected from 12,267 Necropsies, J. Lab. & Clin. Med. **28**:721, 1943.
14. Knight, W. A., Jr.: Muether, R. O., and Moragues, V.: Pancreatic Dysfunction and Liver Disease, J. Missouri M. A. **48**:101, 1951.
15. Knight, W. A., Jr.; Muether, R. O., and Sommer, A. J.: Chronic Recurrent Pancreatitis II. Serum Diastase Levels Following Prostigmine Stimulation, Gastroenterol. **12**:34, 1949.
16. Lopusniak, M. S., and Bockus, H.: Study of Pancreatic Serum Enzymes Following Secretin Injections in Pancreatic Affections, Gastroenterol. **16**:294, 1950.
17. Mayo, J. G.: Pancreatic Calculi, Proc. Staff Meet., Mayo Clin. **11**:456, 1936.
18. Opie, E. L.: Diseases of the Pancreas, 1910, J. B. Lippincott, Philadelphia and London, p. 209.
19. Ibid, p. 258.
20. Popper, H. L., and Necheles, H.: A New Test for Pancreatic Function. Experimental Observations, Gastroenterol. **1**:490, 1943.
21. Popper, H. L., and Sorter, H. H.: Blood Enzymes after Ligation of all Pancreatic Ducts, Proc. Soc. Exper. Biol. & Med. **48**:384, 1941.
22. Snell, A. M., and Comfort, M. W.: The Incidence and Diagnosis of Pancreatic Lithiasis. Review of Eighteen Cases, Am. J. Digest. Dis. & Nutrition **8**:237, 1941.
23. Somogyi, M.: Micromethods for the Estimation of Diastase, J. Biol. Chem. **125**:399, 1938.
24. Whipple, A. O.: Radical Surgery for Certain Cases of Pancreatic Fibrosis Associated with Calcareous Deposits, Ann. Surg. **124**:991, 1946.
25. Whipple, A. O.: A Discussion of the Lesions of the Pancreas Amenable to Surgery, J. Mount Sinai Hosp. **15**:125, 1948-49.
26. Witherspoon, J.: Pancreatic Lithiasis, South. Med. J. **30**:1064, 1937.

Reader's Review

Facial Nerve Safeguards in Benign Parotid Lesion Operations:

Excellent review presenting well know difficulties of these procedures, describes a method of facial nerve identification and dissection to decrease risk of nerve injury, and to simplify technical procedure. Article is well illustrated by photographs and anatomic drawings, not too adequately described heretofore. Advocates maximum exposure by a somewhat Z-type incision, starting at upper border of ear lobe and running downward anterior to ear, swinging backward under ear and then crossing anteriorly along upper neck, just below mandible.

Emphasizes that facial nerve can be identified by utilizing posterior facial vein as a landmark, starting at lower limits of dissection, in constant relationship with lowest large branch of the nerve. Byars, *Ann. Surg.*, September, 1952.

I believe this is an excellent presentation; have recently tried this method since studying this article. It adds to ease of identification of nerve branches and aids dissection of a parotid gland tumor, especially if facial nerve has to be preserved as in a benign condition.

In my own patient, there was absolutely no facial paralysis (even temporary) after surgery, and an adequate dissection was accomplished. However, the anatomic landmarks, stressed by the author, are not quite as easily identifiable as the article would lead one to believe. Moreover, this procedure, as is well known, is tedious. One additional point of interest, in my own case there was good primary healing of flap, even with a comparatively large incision with utilization of one small drain at angle. Thompson E. Potter, M.D., Surgery, *St. Joseph.*

Others Say

The Value of Travel

For the last thirteen years I have been writing a column of travelogues concerning visits to the various medical centers of America, Canada and Europe; however, these travels began many years prior to this, as a result of advise of the late William J. Mayo. He said, "Whenever I hear of anything in a medical way that sounds good, I travel across the country or the seas to find out about it."

It has been my experience that many of the young surgeons with whom I come in contact are extremely well versed in the correct technic to be followed in performing a total gastrectomy or the advantages of silk or cotton but are handicapped by the inexperience of having done their studying and observing under one group of teachers.

What is he missing? Almost everyone agrees that travel has a broadening influence; that most of the time we are too close to the forest to see the trees; that, when we get a thousand or so miles away from home, we have a different aspect on things at home. It takes one out of that rut into which everyone falls who fails to leave his backyard.

In talking with many surgeons it seems to be a universal experience that the most valuable points they learn are not obtained from listening to a man speak, but rather from sitting and visiting with him or watching him at work. Most of us have had the experience of hearing some splendid orations and fine statistical reports that sounded intriguing, only later to be disappointed on observing the speaker perform surgery. We have also had the opposite experience of seeing rather mediocre speakers and writers skillfully perform surgical procedures.

One may travel a thousand miles and yet acquire but a single valuable point in the performance of an operation; yet this one point may mean the difference between life and death for a patient, the difference between excellence and mediocrity for the surgeon.

Without question, most older surgeons would agree that an invaluable part of their medical training had been medical travels, and their only regret would be that they had not done more of it.—Arnold S. Jackson, M.D., *American J. Surg.*

It Is Too Easy to Be a Member of a Medical Society

When a physician becomes a member of his local medical society, he is thereby granted certain privileges for a lifetime; to practice and enjoy the benefits and protection of an organization whose history is replete with sacrifice and whose glory is in its constant endeavor to improve its services to mankind.

What does the average man in medicine give in return for the privilege of membership in this great and honorable profession? Unfortunately the only obligations assumed by a young doctor on election to his society are ethical conduct and the payment of dues.

Doctors must pay with far more than just dues if they are going to be useful members of their medical societies. They must serve.

The preservation of the rights of the profession and the advancement of scientific attainment is a problem that needs and deserves the active participation of every member.

Membership in the local society is a prerequisite to (1) membership in state and national associations, (2) membership in specialty groups and (3) membership on hospital staffs.

It is obvious that if membership is so eagerly sought after in the higher echelons of medicine, then the attainment of membership in the local society, which is a prerequisite to membership in the higher echelons, should not be so lightly taken as it is by some men.

It is evident that a longer probation period, possibly one year with courtesy privileges, should be a prerequisite to membership in a local society. During this period, the candidate should be required to attend at least three fourths of all stated meetings as evidence of good faith and to acquaint himself with the personnel and procedures of the society.

The minimum requirement for renewal of membership in the local society at yearly intervals should be attendance of at least one third of the stated meetings of that society. (We could take a tip from the Rotary Club which does not tolerate lax attendance.)

Perhaps membership in organized medicine is too easily obtainable.—*J. Tennessee M.A.*

No Answer Yet

Therefore, except in unusual cases in which a patient is forced to remain in a hospital for long periods, the over-all hospital expense has not increased in proportion to other living costs. We need not mention that a prudent individual can protect himself by enrolling in the Blue Cross, United Medical Service, insurance covering illness and other plans which are sheet-anchors in the case of unexpected illness.

It is the volunteer hospital that is taking it on the chin. Most of them do not wish to get tangled up in the red tape of bureaucratic government subsidies. Few people are giving money for endowments, reserves are getting lower and lower and deficits are increasing.

So far no one has come forth with the answer. All are hoping that tomorrow some sort of a miracle will occur—a discouraging outlook.—Thurston Scott Welton, *Am. J. Surg.*, October, 1952.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

Case Report

DOUBLE RUPTURE OF THE ATRIAL WALL

STANLEY L. GOLDMAN, M.D.
KANSAS CITY
AND
MICHAEL BERNREITER, M.D.
KANSAS CITY

Rupture of the heart is not infrequent, but disruption of the auricle is unusual. Among 25,000 consecutive autopsies at Los Angeles County Hospital, Edmundson and Hoxie collected seventy-two instances of heart rupture. In three of these cases the site of rupture was not recorded, but in the remaining sixty-nine, all were in the intraventricular septum or ventricular walls.[5] Krumbhaar's classical analysis of all cases reported prior to 1925 showed thirty-five right auricular and twelve left auricular ruptures in a total of 654 cases of perforation of the heart.[10] Davenport's series of ninety-two cases included one left auricular break and three in the right auricle.

The most common cause of these injuries is myomalacia secondary to coronary artery occlusion with infarction.[4] Occasionally, there are other causes such as mycotic aneurysm,[14] metastatic carcinoma,[12] bacterial endocarditis,[9] blast injury,[13] abscess[16] or trauma.[15] The increased incidence of cardiac rupture in irrational patients shows that failure to recognize an infarction and to rest is an important factor.[6, 7] The action of proteolytic enzymes of the polymorphonuclear leukocytes that infiltrate the infarct may have an effect.[5] De la Chapelle[3] suggests that any sort of exercise, even coughing, straining at the stool or coitus, may have an immediate effect in precipitating the rupture.

Since Krumbhaar's review there have been few cases of atrial rupture reported. One instance occurred after bilateral occlusion of both coronary arteries.[11] Clowe and Gorham[1] presented a case of obliterating endocarditis with infarction of the right atrial wall with rupture, and statistically claimed the right auricle to be involved three times more frequently than the left. They also emphasized that atrial ruptures occur in younger patients in contrast to the advanced age of patients with ventricular ruptures. More unusual occurrences were traumatic hematoma,[15] left auricular rupture from metastatic carcinoma[12] and aneurysm of the sinus of Valsalva rupturing into the right auricle.[8, 9]

Because of the rarity of auricular rupture, the following case may be of interest.

REPORT OF CASE

A. S., 60 year old merchant, with known hypertension and obesity for many years, suddenly lost consciousness while on the stool. For one month he had complained of severe dyspnea and cough. Physical examination revealed an obese comatose male with extreme cyanosis. Pupils were small and nonreactive to light. Respiration was irregular and extremely labored. The cyanosis and labored respiration decreased markedly with the administration of oxygen and changing his position to allow an unobstructed airway. Blood pressure was 270/180, pulse 120, and temperature 100 F. The heart tones were loud and

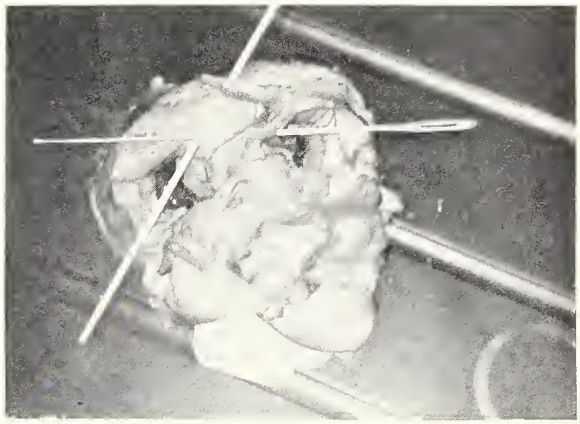


Fig. 1

strong with a blowing systolic murmur present over the entire precordium. The lungs were full of coarse musical rales without crepitation. The abdomen had no tenderness nor abnormal masses. The extremities were flaccid and no deep tendon reflexes were elicited. The laboratory findings were urinary specific gravities of 1.010 to 1.020, albumin 4 plus, sugar negative, sediment with many red blood cells and pus cells and granular casts. The white blood count was 30,950 with 91 per cent polymorphonuclear cells, and red blood count 5,030,000. Nonprotein nitrogen was 35.2 mg. per cent, sugar 152 mg. per cent, chlorides 435 mg. per cent and carbon dioxide combining power 58 volumes per cent. Electrocardiogram showed left bundle branch block. Death occurred thirty hours after he became unconscious.

At autopsy, a large irregular hemorrhage in the pons of the brain was found. The pericardium contained 300 cc. of partially clotted blood. The heart weighed 500 grams. The epicardium was smooth except for a rough edged perforation 0.2 centimeters in diameter in the posterior wall of the right atrium near the junction of the AV groove and the intra-auricular septum. The wall of the atrium near this point was thin and translucent. In the posterior portion of the intra-auricular septum was another perforation 0.2 centimeters in diameter similar to that in the posterior wall of the right atrium (fig. 1). The myocardium was firm and dark reddish brown in color with no evidence of old or recent infarction. The left ventricle averaged 2.5 centimeters in thickness and the right 0.5 centimeters. The valves were smooth and competent. Cut surfaces of the lungs were bluish grey anteriorly but purplish red and firm posteriorly. Except for a few adhesions in the region of the appendix, the gastrointestinal tract was normal. The

kidneys, each weighing 210 grams, showed finely granular reddish brown surfaces with irregular pitted areas. The capsule stripped with slight difficulty. The cortex measured 6 millimeters and was poorly demarcated from the medulla. The liver, spleen and pancreas showed no significant changes.

DISCUSSION

In this case the primary lesion is the pontine hemorrhage. Although the man was in coma, the movements due to the extreme respiratory distress and the death throes probably increased the already high blood pressure to the point at which the myocardium of the atrium and the septum ruptured. The exact pathogenesis of the weakening of the heart muscle must remain speculative. It is interesting to note that even with electrocardiographic evidence of bundle branch block and the history of hypertension and obesity over many years, there was no postmortem evidence of myocardial infarction.

SUMMARY

An unusual case with rupture of the right atrial wall and intra-auricular septum is presented. The literature reveals no instances of a like double rupture.

We wish to acknowledge the help of Dr. Angelo Lapi, Pathologist, St. Mary's Hospital, Kansas City, who performed the autopsy.

1308 Bryant Bldg.

BIBLIOGRAPHY

1. Clowe, G. M.; Kellert, E., and Gorham, L. W.: Rupture of the Right Auricle of the Heart, Am. Heart J. **9**:324, 1933.
2. Davenport, A. B.: Spontaneous Heart Rupture—A Statistical Summary, Am. J. M. Sc. **176**:62, 1928.
3. de la Chapelle, C. E.: Spontaneous Rupture of the Heart, Am. Heart J. **1**:315, 1925.
4. Diaz-Rivera, R. S., and Miller, A. J.: Rupture of the Heart Following Acute Myocardial Infarction, Am. Heart J. **35**:126, 1948.
5. Edmundson, H. A., and Hoxie, H. J.: Hypertension and Cardiac Rupture, Am. Heart J. **24**:719, 1942.
6. Friedman, S., and White, P. D.: Rupture of the Heart in Myocardial Infarction. Experience in a Large General Hospital. Ann. Int. Med. **21**:778, 1944.
7. Jetter, W. W., and White, P. D.: Rupture of the Heart in Patients in Mental Institutions, Ann. Int. Med. **21**:783, 1944.
8. Kawaski, I. A., and Benenson, A. S.: Rupture of an Aneurysm of the Sinus of Valsalva into the Right Auricle, Ann. Int. Med. **25**:150, 1946.
9. Kawaski, I. A., and Schultz, F. B.: Aneurysm of a Sinus of Valsalva with Rupture into the Right Auricle, Am. Heart J. **41**:149, 1951.
10. Krumbhaar, J. E.: Spontaneous Rupture of the Heart, Am. J. M. Sc. **170**:828, 1925.
11. Lisa, J. R., and Ring, A.: A Case of Occlusion of Both Coronary Arteries with Rupture of the Auricle, J. Lab. & Clin. Med. **16**:1083, 1931.
12. McNamara, W. L.; Ducey, E. D., and Baker, L. A.: Cardiac Rupture Associated with Metastases to the Heart from Carcinoma of the Duodenum, Am. Heart J. **13**:108, 1937.
13. Miller, J. M.: Rupture of the Heart From Blast Injury, Arch. Path. **43**:406, 1947.
14. Pirani, C. L.: Erosive Mycotic Aneurysm of Heart with Rupture, Arch. Path. **36**:579, 1943.
15. Rixford, E.: Traumatic Rupture of Right Auricle With Patient Surviving Nine Weeks, Am. Heart J. **11**:111, 1936.
16. Weiss, S., and Wilkins, R. W.: Myocardial Abscess With Perforation of the Heart, Am. J. M. Sc. **194**:199, 1937.

Your Patients Read

"What to do until the Doctor comes." *The American Magazine*, January, 1953.

Advertisement

From where I sit *by* Joe Marsh

Bunny's Story Had a Nice "Ring" to It

"Bunny" Baker—our cute blonde secretary over here at the newspaper—showed up late for work the other morning and "scooped" us all.

Bunny came in carrying a big box of cigars under her arm and, without a word, went around dropping a cigar off at each desk. Finally, when we were all but bursting with curiosity, Bunny told us what was going on. She held up her left hand and proudly displayed a lovely diamond ring on her third finger.

"It's a boy," she said. "Six feet two, a hundred ninety-six pounds."

From where I sit, Bunny's way of announcing her engagement showed real ingenuity. And ingenuity—doing things in a better and different way—is a typical American trait. Freedom of expression, freedom to work how and where we please . . . even a little thing like the freedom to choose a glass of beer after a day's work—these are some things that make our nation so "engaging."

Joe Marsh

Copyright, 1952, United States Brewers Foundation

Special Article

FINANCIAL PLANNING FOR MEMBERS OF THE MEDICAL PROFESSION

MR. JOSEPH TRACHTMAN
NEW YORK

Our subject is "Financial Planning for Members of the Medical Profession." Why just the medical profession? Why are they singled out from other groups? Are their problems any different? Do they need or deserve special consideration or treatment?

Like other business and professional groups, the medical profession is composed of human beings, with all the personality variations which make generalizations difficult. Like any other group, they start their professional careers with rather modest incomes, hoping and expecting to achieve increased earnings as they become older and more experienced. They get married, raise families and most of them live to see their children attain a measure of financial independence. They also pay more taxes than they would like to pay.

Unlike most other groups, however, a doctor has spent many years of intensive study and training in a field far removed from business life, with little opportunity to gain business or financial experience. After embarking upon his professional career, he finds the demands upon his time and the great preoccupation with activities unrelated to business to be such that he has less and less opportunity to become acquainted and experienced with problems of a financial nature. For this reason doctors are frequently regarded as quite inexperienced, even naive, by persons engaged in selling activities within the financial field.

This will concern, generally, two aspects of a physician's financial life: one, the creation of an estate, its investment and management; the other, the establishment of an orderly plan or arrangement to enable the estate to do the most for the doctor while living and for his family after his death. These problems vary materially with the circumstances of each individual, especially with his age. So I will start with the young physician, one who has recently started his own practice. He has a wife and one or two young children. He has not yet had time to create an estate of any consequence. In fact, he may be hard pressed to care for his family as well as he would like. He has no major tax problems as yet, either from income taxes or estate taxes. His principal estate asset is his stock in trade; his education, training and skills, so expensive in time and money to acquire. If he lives, in all probability, he will be able to care adequately for his own needs and those of his family and to accumulate an estate of at least modest size. His immediate objective, therefore, is to protect his wife and infant children from any unexpected loss of this principal asset. This can best be done through the purchase of life insurance and it will, or should, be one of the first investments he makes.

But what kind of insurance shall he buy? Many types are available. Likely some type of term insurance will best meet his requirements. He will need the maximum dollar protection immediately, and can do this with less protection in later life. In making this decision (as well as everything else affecting his life insurance program) he should rely upon the advice and counsel of a trained and experienced life underwriter. As he grows older, his life insurance program must be adapted to meet altered circumstances and other changes. An efficient life underwriter can be of great help from time to time.

The next investment quite likely will be a home. He will probably acquire the title to this home in joint names with his wife. There are disadvantages as well as advantages to joint ownership of property, some of which will be discussed later. At this point in the young physician's life, however, the advantages of owning his home jointly, in most cases, will outweigh the disadvantages.

Should the young physician have a will? The answer is by all means "yes." True he will have little estate to dispose of, for it will consist almost entirely of life insurance, which would not require a will, and his home, jointly owned and automatically belonging to the wife if she survives. Only a simple will is required, but it enables him to appoint the executor of whatever estate he has, to waive any requirement of bond of the executor (an unnecessary burden upon his estate); and, of greatest importance, it permits him to appoint the person or persons who are to be guardians of his children, probably his wife, or someone else if she fails to survive him.

With all this done, the young physician has completed his first financial and estate plan, usually no more complex than the one just outlined. However, as he becomes established and his earning capacity grows, his problems will be more complex. His plans should be reviewed and revised to meet constantly changing circumstances from time to time.

Skipping a few years, the more mature physician has a larger income. True, his net may not suit him, after paying large income taxes and greater

---

Excerpts from speech by Mr. Joseph Trachtman, New York, to the Jackson County Medical Society at an invitational dinner meeting under the sponsorship of the City National Bank. Reprints of this article, as well as copies of a booklet entitled "Estate Planning for Physicians" and containing a series of articles (Journal of the American Medical Association) may be obtained without charge by writing the City National Bank and Trust Company, 10th and Grand Avenue, Kansas City, Missouri, Attention: Mr. Charles G. Young, Jr., who prepared this article.

expenses of his family, but he should have some income left with which to build an estate.

What will he do with these funds? If he is smart, sooner or later he will invest these funds so they may produce income and appreciation to help in augmenting his estate. What investments shall he select? More life insurance? Of a different type or form? Bonds? If so, what type? Real estate? Common or preferred stocks? These are difficult questions and not capable of any generalized answers. About the only generalization is that any investment program must be geared to the physician's particular circumstances and the investment outlook. The program adopted must be reviewed continually and revised whenever necessary to meet changing conditions, and nothing should be done except with advice and counsel of someone skilled in this subject. Even a determination not to invest these excess funds involves an investment decision.

The only guiding principle offered in such a brief discussion is that the physician should follow a balanced investment program—one well diversified, containing both fixed dollar obligations (bonds, savings accounts and life insurance) and equity investments (real estate, common and preferred stocks and perhaps mutual fund shares). Honest, competent investment advice is available through the trust departments of banks, investment counsellors and other sources.

At this point the physician will have both income and estate tax problems. There is not much he can do about income taxes. He may find some relief through the use of municipal bonds or other forms of investment which produce tax free income or capital gains in lieu of a larger return of ordinary income. It may be advantageous to make gifts, particularly to his family, so that the income from property so given will be taxed to others whom he would have to be assisting anyway; or to a new entity such as a trust. Gifts may also save estate taxes when he dies. In any event, an overall plan should be established with advice of an attorney. The principal tool of any such plan is his will, which should be revised with the changes in his family, his estate and his tax problems in mind. In all probability, this status requires a more complex and lengthy will than at first.

Let us look at the estate tax problems for a moment. If his estate (including life insurance, jointly held property and all other assets) exceeds $60,000 in value, an estate tax may be payable, unless he plans carefully. Even with such planning, some estate taxes will be payable if his estate exceeds $120,000. The reason for the variance in these two figures is that he can leave up to one half of his estate to his surviving wife tax free, and his estate will have an estate exemption of $60,000. To obtain the benefit of the deduction for property left to his wife, it is necessary for the property either to be left outright to her or in accordance with certain requirements imposed by the tax laws and regulations. Utilization of these tax saving opportunities should be made only after full consideration of all the circumstances surrounding his family and estate, and upon advice of his attorney.

It may be something of a surprise for many to find life insurance and jointly held property subject to estate taxes. While life insurance may be obtained which is not subject to such taxes, it would be difficult for much insurance of this type to be held at this point. Jointly held property will be subject to estate taxes in the same proportion of its market value (at the physician's death) as the original cost of the property was contributed by each of the joint owners. It is assumed that property was purchased out of income produced by the physician. Thus its full value would be subject to estate taxes upon his death and again upon the death of his wife. While this may not be a disadvantage, at least it clarifies one frequent misconception. There are disadvantages, however, some of which should be mentioned.

If the physician's wife survives, she becomes absolute owner of the jointly owned property with unrestricted right to designate ownership upon her death. This may or may not prove undesirable, but the result should be understood. Another disadvantage is that, although the jointly owned property was taxed at its full value at the physician's death, the surviving wife's cost (for capital gains tax purposes) will still be the original cost at the time it was acquired by them. This may result in an estate tax upon an unrealized appreciation at the time of the physician's death plus a capital gains tax upon the self same appreciation realized upon sale of the property by the wife after his death. In addition, the physician may have incurred a gift tax liability when the property was first placed in joint ownership with his wife, or at least he will have dissipated some of his gift tax exemption; and the full value of the property will be included in his wife's estate when she later dies.

In arranging his estate and preparing his will, this hypothetical physician may find it quite helpful and advantageous to use one or more trusts. Many people look upon trusts as an arrangement peculiar to the wealthiest; nothing could be more erroneous. By providing in his will that all or a portion of his estate would go in trust, the physician may effect a substantial savings in estate taxes upon the death of his wife while giving her the same benefits as though she had been left the property outright—and without the burdens and responsibilities of its day to day management and investment.

If the physician has had little opportunity to acquire skill and experience in business matters, certainly his wife will be even less prepared upon his death. Experience indicates that most wives appreciate and prefer the trust arrangement, if fully informed by the husband of the arrangement and included in the discussions and decisions leading up to the estate plan. Space does not permit

a detailed explanation of the nature or operation of a trust. Suffice it to say that one which is properly planned and drafted may give the wife and children the same, if not more, protection than if they had received the property outright—all at an unexpectedly low cost.

Whether a physician arranges for a trust under his will or not, he must designate someone to serve as executor of his estate. If he appoints his wife, he will thrust upon her many of the same important duties and responsibilities of management. Even though the executor's duties would not last as long as those of a trustee, nevertheless responsibility for difficult business and legal decisions must be assumed. If, on the other hand, the physician elects not to appoint his wife, but appoints some friend, he has no assurance the friend will live to complete these duties or that the friend will be able and willing to devote the time and attention required to do a competent job. Trust departments of banks perform these services at no greater fee than a friend would receive. However, if a bank is appointed, the physician will be assured the executor selected will be alive to serve, will have the necessary skill and experience to perform in a competent manner and will be able to devote all the time required, whatever the circumstances may be.

Only a few of the decisions required of a physician in formulating his estate plan, and preparing his will, have been mentioned. Above all it should be noted that at this point in his career and during the balance of his life any plan adopted should embrace all property included in making up his estate, including life insurance, and should represent a coordinated arrangement.

Looking ahead to a later age of this hypothetical physician and his problems then, he will have attained his peak earnings years. In fact, he may have passed the peak or may foresee a period of declining earning power. In all probability, his children will have completed their education, or nearly so. At this point, the physician should begin to think more and more about financial security when he is no longer able to work at full speed or at all, and, for his wife after his death. While his children still represent a part of this picture, he is likely to be as much concerned about his grandchildren as his own children.

If everything has gone well, the physician has accumulated a substantial estate. He may have purchased annuities or, at least, should be thinking of doing so. In the solution of this problem, doctors, like other professional men, do not enjoy the same tax advantages as people in other lines of endeavor.

Most other people will be eligible for social security benefits after age 65. In addition, many are participants in private retirement plans established by the business for which they work. The monies used to pay these private pensions are not taxed to persons entitled to them until the pensions are actually paid. By contract, professional people (and those who are self employed) do not have an apportunity to create a tax free pension fund. In this connection, the American Bar Association, the American Medical Association and other similar organizations are sponsoring proposed tax legislation which would correct this inequity. This proposed legislation is known as the Keogh-Reed Bills. These bills deserve the attention and support of every professional and self employed person.

The doctor may now find gifts and other property arrangements even more attractive than before. He may find quite useful a living trust or an agency arrangement with the trust department of a bank, under which he is relieved of the details and worry of the investment and management of his property. Gifts of some amount, either in trust or outright, may have some particular appeal, since they may reduce his income taxes, as well as estate taxes upon his death. For reasons previously explained, no such program should be undertaken without the full advice and counsel of the physician's attorney and investment counsellor and perhaps the trust officer of his bank.

Insofar as the physician's will is concerned, his problems may not be much different than when his will was last prepared, except that death will be more imminent and more frequent review and revision likely will be required. Moreover, the physician should be better able to make more adequate and proportionate provision for his wife and the other members of his family. The needs of his children could now be more certainly appraised, since their education is now completed or nearly so. If successful, the physician may even be in a position to think in limited terms of charitable bequests or a small charitable trust. And, certainly, estate taxes will play a larger part. For these reasons the need for legal and tax advice in formulating an overall estate plan will be greater than ever before.

The reader may feel that the only real benefit of this article is the enjoinder to obtain expert and experienced advice. While this may not seem to offer definitive and concrete solutions to the physicians' problems, the efforts will not have been in vain if at least some physicians are induced to seek expert advice of the type recommended. These problems discussed have no easy solution; they require constant effort and planning based on thorough knowledge, skill and experience.

Buy

U. S. Savings Bonds

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

WHO, US?

From one recent day's mail erupted three bits of information which all but proved doctors were first-class skunks. The first little pearl was from the national press. Some admiral called doctors a bunch of selfish so-and-so's for not rushing into military service.

This lambasting explosion was adequately answered by spokesmen for national medical and dental groups. In fact, it was soft-soaped a day later by the original speaker. But it sure hit headlines and did damage while it lasted. And, to aver that it was merely a frustration phenomenon of the male menopause, a menopausal bleating, did not soften the impact or repair the black eye.

Next, we read where doctors had "slud" into third spot among those under suspicion for income tax evasion. This is probably a statistical truth. Turn five identical income tax returns over to five different snoopers, you'll get five different answers from them. Moreover, the guy who says physicians haven't been "getting the works" from the government boys, with deliberate, cold-blooded intent, is just plain blind or dumb! And, if you concentrate on any one group (preachers, on up and down), you'll find lots of mistakes.

Item three, in the lugubrious mail of this particular day, low rated the credit standing of doctors. It seems that about 1 per cent of doctors owe (or have owed) somebody and hence got blackballed. Naturally, we all know some particular practitioner who occasionally gets his x-ray machine, or Cadillac, "repossessed" until he makes another payment. But this is not surprising. Actually, the percent who "spread it as thin as they can" seems relatively small.

None of this is written to criticize or condone, to expatiate or expiate, the weaknesses of colleagues. After all, we are but human. And the mantle of Aesculapius does not transmute us into little gods, though we are often called upon to play such a role. However, needling does serve one useful purpose: It is well at times to stop, look and listen (honestly and objectively), concerning such charges.

Then ask, *Who, Us?*

VINCENT T. WILLIAMS, M.D.

From Within (II)

In the previous "From Within" it was pointed out that initial reforms in medicine came from efforts and ideas within our ranks. This brought us to a status where every practitioner was supposedly (and usually was) possessed of the degree M.D. conferred by a chartered medical school—and was duly licensed.

With our ever extending frontier and growth of population and need for more doctors, inferior medical schools sprang into existence. They turned out doctors, many of whom merely sufficed to pronounce death, practice midwifery, look at tongues, feel pulses and prescribe pills. Many were poorly trained.

What happened? The American Medical Association stepped in. It defined the requirements for Grades A, B, C and D medical schools and served notice that after a certain date schools would be listed and graded. The poorest schools dropped out—some B schools raised themselves to Grade A, and today we have only grade A schools.

Again a great reform—originating entirely from within our ranks. It is well in these days to remember that our reforms were due to doctors, and not starry-eyed idealists and greedy, ignorant and unscrupulous politicians.

F. T. H'DOUBLER, M.D.

Green Toothpaste, Green Money

February. Month of Washington and Lincoln, national symbols of impeccability, rectitude and super-synonyms for truth and integrity. Our thoughts turn this month, as they must in each

and every month, to the National Weeks and Days that have become ingrained into our national consciousness by mysterious and unknown creators and their advertising agents.

To whom are we indebted for National Clean-up Week, National Turn-over-your-mattress Day, National Feed-the-Peony Bush Week, and so on ad nauseam? Could it be the paint manufacturers, the tooth-paste makers, the florists? Certainly it could be—and it probably is.

Let us place this in the record first and foremost: we're not "mad" at anybody. Annoyed, yes; but not angry. Because the great American public has been bamboozled so long and so assiduously that it would, in all probability, feel neglected were it not urged and prodded constantly into continuing its attention to the innumerable commodities that have become part and parcel of every day Americana.

The public has forgotten that the cigarette people who pioneered the physiologic vogue in tobacco advertising—"Not a cough in a carload!" —were the first to disclaim such aims—"A treat instead of a treatment"—when the competitors hopped on the gravy train. The public was needled into setting up the clamor for chlorophyl, that innocuous staple of the high school botany class, until today its aggrandizement has resulted in its identification as the ingredient of principal importance from shaving cream to dog biscuits.

O tempora! O mores! Whatta mess! New symbols of an enlightened era: green toothpaste and green money.

Jerome I. Simon, M.D.

Trends in Thinking on Fundal Carcinoma

Living in the age of the aged has resulted in a considerable metamorphosis of thinking relative to much of medicine. Not the least of these changes concerns carcinoma of the body of the uterus.

Deaths from cancer of the uterus account for 12.7 per 100,000 population. Accepting some locale difference in reporting frequency of cancer this represents the most common focus in the female. Modern textbooks commonly give the ratio of fundal to cervical cancer as one to six, and yet in states where pelvic cancer is a reportable disease, cancer of the corpus has recently almost equaled cancer of the cervix in frequency. A conservative ratio is probably one to three.

Conjecture exists as to whether there is actually an increased incidence of the disease. Whether improved technics in diagnosis, increased numbers of the aged, or whether actually the copious amounts of therapeutic estrogens prescribed may have reflected in the altered statistical picture is questionable. *Bona fide* evidence that estrogens *per se* have been etiologically significant is lacking, though there is strong inference that illogic use of estrogens may accelerate growth of this tumor. Further, the commonly reported coexistence of fundal carcinoma and granulosal cell tumor of the ovary and the sequential studies on endometrium passing through progressive phases of hyperplasia with the ultimate development of cancer strongly suggests an estrogen relationship, and may well allow one to ponder the question, "Is this truly a disease of involution or rather the effect of biologic disturbance on the predisposed cell to abnormal chemical stimulation?"

The diagnosis of fundal carcinoma is not difficult if suspicion of the disease clinically occurs. The uterus is so accessible to digital examination and exploration by probe and curet that study should establish presence of the disease promptly.

Cytologic smear examination, though not as satisfactory as in cervical carcinoma is worthwhile for screening where adequate personnel for evaluation exists. However, final confirmation of the disease before treatment must always be made by histologic study after fractional curettage. This does not imply that each single menstrual aberration must be hospital studied. However, postclimacteric bleeding must be accepted as organic in origin until disproven and, consequently, studied by careful fractional curettage. The incipient climacteric and climacteric likewise require careful evaluation. Suspicion, particularly in this group must fall in women who on previous curettage have shown evidence of varying degrees of hyperplasia for Hertig and Sommers have clearly shown a relationship between this group, carcinoma *in situ,* and true invasive endometrial cancer. Novak, Randall and others have reported the increased incidence of endometrial cancer in women with long standing histories of atypical and irregular bleeding. Likewise, spinsters and the nulliparous have been more predisposed to the disease in contrast to cervical carcinoma where parity is a common associated finding. Heredity is not established as a major factor, though familial trends are noted, and closer supervision in the patient with an unsatisfactory family history is justified.

This uterine neoplasm is among the most amenable to treatment if diagnosed reasonably early. Treatment, though essentially unchanged in recent years, is not uniform. Surgery, namely, panhysterectomy, and bilateral salpingo-oophorectomy is the most potent therapeutic arm. McKelvey has indicated that this may be the only treatment necessary except palliation. Arneson, Schmitz, Corscaden, Miller and others have strongly emphasized the value of preoperative radiation. With this latter view, we agree until further evidence can be presented in support of the former philosophy, after adequate well classified material has been carefully and thoroughly followed.

(Continued on page 134)

Fraternally Yours

February, Birthmonth of Two Favorite Americans

Much stuff has been written about George Washington and Abraham Lincoln; some is tripe, some is true. It would seem of greater interest, for physicians, to present the more mundane, even macaber, aspects of these men.

The two items, presented, were written by physicians without heroic or romantic overtones. From the book "Aesculapius Comes to the Colonies," written by Maurice Bear Gordon, M.D. (Ventnor Publishers), we reprint a blow-by-blow account of the last day of "The Father of Our Country." This entire book is highly recommended, especially for all physicians.

But let us read the words of Drs. James Craik, Elisha Cullen Dick and Gustavus Richard Brown:

Some time in the night of Friday the 13 inst., having been exposed to rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the windpipe, called in technical language, cynanche trachealis. The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough, and a difficult rather than painful deglutition, which were soon succeeded by a fever and a quick and laborious respiration. The necessity of blood-letting suggested itself to the General; he procured a bleeder in the neighborhood, who took from the arm in the night, twelve or fourteen ounces of blood; he would not by any means be prevailed upon by the family to send for the attending physician till the following morning, who arrived at Mount Vernon at eleven o'clock Saturday morning. Discovering the case to be highly alarming, and foreseeing the fatal tendency of the disease, two consulting physicians were immediately sent for, who arrived, one at half past three and the other at four in the afternoon. In the interim were employed two copious bleedings; a blister was applied to the part affected, two moderate doses of calomel were given, an injection was administered which operated on the lower intestines, but all without any perceptible advantage, the respiration becoming still more difficult and distressing. Upon the arrival of the first of the consulting physicians, it was agreed, as there were yet no signs of accumulation in the bronchial vessels of the lungs, to try the result of another bleeding, when about thirty-two ounces were drawn, without the smallest apparent alleviation of the disease. Vapours of vinegar and water were frequently inhaled, ten grains of calomel were given, succeeded by repeated doses of emetic tartar, amounting in all to five or six grains, with no other effect than a copious discharge from the bowels. The powers of life seemed now manifestly yielding to the force of the disorder. Blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning, now became almost impracticable, respiration grew more and more contracted and imperfect, till half after eleven o'clock on Saturday night, when, retaining the full possession of his intellect, he expired without a struggle.

Then, for some good Sunday quarter-backing, read Brown's letter to Craik, written years later:

You must remember he (i.e. Dick) was averse to bleeding the General, and I have often thought that if we had acted according to his suggestion when he said, 'He needs all his strength—bleeding will diminish it,' and taken no more blood from him, our good friend might have been alive now. But we were governed by the best light we had; we thought we were right, and so we are justified.

How natural! How like all of us have felt at times about patients, distinguished and otherwise!

You will recall the salient facts of Lincoln's death: Good Friday night in Ford's Theater; "Our American Cousin" was the play; and then, the shot. But (from *Surgery, Gynecology, and Obstetrics*, November, 1951, page 645) let us present the autopsy report:

Surgeon General's Office
Washington City, D. C.
April 18th, 1865

Brig. Gen. J. K. Barnes
Surgeon General, U. S. A.
General:

I have the honor to report that in obedience to your orders and aided by Asst. Surg. E. Curtis, U.S.A., I made in your presence at 12 o'clock this morning an autopsy on the body of President Abraham Lincoln, with the following results:

'The eyelids and surrounding parts of the face were greatly ecchymosed and the eyes somewhat protuberant from effusion of blood into the orbits.

There was a gunshot wound of the head, around which the scalp was greatly thickened by hemorrhage into its tissues. The ball entered through the occipital bone about an inch to the left of the median line and just above the left lateral sinus, which it opened. It then penetrated the dura mater, passed through the left lateral ventricle and lodged in the white matter of the cerebrum just above the anterior portion of the left corpus striatum where it was found. The wound in the occipital bone was quite smooth, circular in shape with beveled edges, the opening through the internal table being larger than that through the external table. The track of the ball was full of clotted blood and contained several little fragments of bone with a small piece of the ball near its external orifice. The brain around the track was pultaceous and livid from capillary hemorrhage into its substance. The ventricles of the brain were full of clotted blood. A thick clot beneath the dura mater coated the right cerebral lobe. There was a smaller clot under the dura mater of the left side. But little blood was found at the base of the brain. Both the orbital plates of the frontal bone were fractured and the fragments pushed up toward the brain. The dura mater over these fractures was uninjured. The orbits gorged with blood."

I have the honor to be
Very Respectfully
Your obt Servt
(Signed) J. J. Woodward
Asst Surgn. U.S.A.

(Signed)
A true copy
(Signed) George Otis
Assistant Surgeon U.S.A.

These are the actual reports, given by physicians, concerning the deaths of the two great Americans, born in February. We thought physicians might be interested.

V. T. W.

(Continued from page 133)

It is apropos that some consideration be given the management of adenomatous hyperplasia. The occurrence of this lesion in the asymptomatic young woman need no further therapy, though periodic examination would seem desirable. However, such hyperplasia seen in the postclimacteric patient or intraclimacteric individual living remotely from skilled medical care or with previous evidence of persistent hyperplasia should be divorced from her uterus ("Nicht krebs aber besser aus") Halben.

Fundal carcinoma has a high degree of curability. Close attention to the abnormal variations in bleeding of women, early institution of simple diagnostic procedures, and the judicious use of estrogens in the climacteric patient truly manifesting symptoms of hypo-estrogenism will result in a higher salvage of the cancer patient, better doctor-patient relationship, and vastly improved medicine.

GERALD L. MILLER, M.D.

Missouri Medical Meetings

February 12-14: Society of University Surgeons, Park Plaza Hotel, St. Louis.
March 19-21: Tri-State X-Ray Technicians, Hotel President, Kansas City.
March 23-26: American Academy of General Practice, Kiel Auditorium, St. Louis.
March 28-29: Mid-Continent Psychiatric Association, Hotel President, Kansas City.
March 30-April 1: International College of Surgeons, Regional Conference, Statler Hotel, St. Louis.
April 1-4: American Association of Pathologists and Bacteriologists, St. Louis.
April 6-8: Missouri State Nurses Association, Statler Hotel, St. Louis.
April 15-17: Midwest Hospital Association, Municipal Auditorium, Kansas City.
April 19-22: American Radium Society, Chase Hotel, St. Louis.
April 24-25: Missouri Tuberculosis Association, Hotel President, Kansas City.
April 26-29: Missouri State Medical Association Annual Meeting, Municipal Auditorium, Kansas City.
May 4-6: Missouri Public Health Association, Hotel Governor, Jefferson City.
May 11-14: American Urological Association, Jefferson Hotel, St. Louis.
May 25-28: Catholic Hospital Association, Municipal Auditorium, Kansas City.

Component Society Meeting Dates

Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.

Musings of the Field Secretary

It is frequently repeated that the American people are the most organized in the world. They are always joining or forming some club, society, association, et cetera. There must be a number of good reasons for this. Maybe some folks feel there is safety in numbers, some may be just plain lonesome, others figure two or more heads better than one even with some a bit square, a few possibly have the idea that united we stand while divided we fall, some may see the opportunity to run something and now and then a number of intrepid souls actually have visions of getting a job done through better organization.

The proof of "Grandma's puddin'" has always been in its "eatin'." There are specific illustrations in the Missouri State Medical Association of this principle being exemplified. The majority of hyphenated county medical societies are demonstrating by actual activity, so conspicuous by its absence prior to hyphenation, the value of effective organization. For the most part, these hyphenations have been like a "shot in the arm" to a number of former small inactive societies. Hyphenations comprising two to nine counties have been effected. These have brought together numerous county societies which have had so few members that no meetings were being held, no society activity was in progress and interest was waning. Today effective active organizations have replaced many former inactive ones. It is well to keep in mind that these hyphenations do not affect an individual county's representation in the House of Delegates of the Association. Each county comprising a hyphenation is entitled to the same number of delegates as it would have if there were no hyphenation.

In forming a hyphenated society, a name for the new society needs to be submitted along with a constitution and by-laws through the Councilor to the Council of the Association, which, upon approval, issues the charter. Suggested constitution and by-laws are available from the Association office.

There are a number of logical hyphenations that might well be considered by various societies in the state. Justification for such consideration can be obtained easily from a cursory investigation of one or two already functioning hyphenated societies.

MEMBERS IN THE NEWS

The next State Board Examination will be given in Jefferson City on February 19 and 20. The Board will meet on February 9 to consider reciprocity applications.

New officers of the medical staff of the Perry County Memorial Hospital elected recently are **William Utterman**, M.D., president; **L. W. Feltz**, M.D., vice president, and **J. J. Bredall**, M.D., secretary.

The Chicago Medical Society will hold its annual Clinical Conference at the Palmer House, Chicago, March 3, 4, 5 and 6.

J. M. Perry, M.D., Princeton, was honored for his fifty years of practice at a dinner given December 4 by the Princeton Chamber of Commerce. More than a hundred persons were in attendance.

Rudolph Knapp, M.D., Golden City, spoke before the Lamar Rotary Club on December 2 and discussed his experiences in Germany prior to his becoming an American citizen.

Among Colonels appointed by incoming Governor Phil M. Donnelly are the following physicians: Drs. **Claude J. Hunt**, Kansas City; **S. F. McCracken**, Excelsior Springs; **Roland F. Elkins**, Springfield; **W. O. Finney**, Chaffee; **A. D. Markel**, Poplar Bluff; **E. L. Spence**, Kennett.

James W. Colbert, Jr., M.D., will assume his duties as Dean of the St. Louis University School of Medicine in March. Dr. Colbert who will be the youngest dean of any major medical school in the United States, comes to St. Louis from Yale University School of Medicine where he has been assistant dean in charge of postgraduate studies.

August A. Werner, M.D., St. Louis, made the International Cruise-Congress to South American and the West Indies, leaving New York on January 7. He served as an officer in the section on endocrinology and spoke before the Congress on "Climacteric in Women and Men."

NEW MEMBERS

Barrett, Scott R., M.D., St. Louis
Clarke, Michael J., M.D., Springfield
Cohen, Benjamin H., M.D., St. Louis
Cooke, Francis W., M.D., Caruthersville
Crowell, Hugh C., M.D., St. Louis
Engelbreit, Joseph J., M.D., St. Louis
Evans, John C., M.D., St. Louis
Fulkerson, Wilbur E., M.D., Higginsville
Gorelick, David F., M.D., Springfield
Greditzer, Arthur S., M.D., St. Louis
Green, John R., M.D., Kansas City
Hartman, Howard E., M.D., St. Louis
Haskins, Arthur L., M.D., St. Louis
Hodgson, Robert B., M.D., Kansas City
Johnson, Warford B., M.D., Springfield
Kuebrich, Thomas C., M.D., St. Louis
Lawton, Lawrence W., M.D., St. Louis
McNamara, John J., M.D., St. Louis
McNeel, John O., M.D., St. Louis
Muschany, Norman K., M.D., Troy
Naryka, Joseph J., M.D., St. Louis
Nelson, Fred L., M.D., Kansas City
Owen, James W., Jr., M.D., St. Louis
Patterson, John R., M.D., Kansas City
Putnam, John A., M.D., Carthage
Ritter, Hubert A., M.D., St. Louis
Ruchero, M. Cecelia, M.D., St. Louis
Sherman, Alfred I., M.D., St. Louis
Shoulders, Harrison H., Jr., M.D., St. Louis
Smiley, William, M.D., St. Louis
Stewart, Robert H., M.D., Kansas City
Stockton, Raymond W., M.D., Kansas City
Styblo, Clarence J., M.D., St. Louis
Waggoner, Sharon E., M.D., St. Joseph
Weaver, Richard H., M.D., St. Louis
Wilhelm, Warren F., M.D., Kansas City
Williams, Edward B., Jr., M.D., St. Louis
Willis, Norman E., M.D., Poplar Bluff
Yarbrough, William C., M.D., St. Louis

IN MEMORIAM

Parker, Rainey C., M.D., Steelville, a graduate of Barnes Medical College, 1904; past president and honor member of the Phelps-Crawford-Dent-Pulaski County Medical Society; aged 92; died December 6.

Myers, George T., M.D., Macks Creek, a graduate of the University of the South, Sewanee, Tennessee, 1898; past president and member of the Camden County Medical Society; aged 79; died December 15.

Schmidtke, Edwin C., M.D., Columbia, a graduate of Washington University School of Medicine, 1931; member of the Boone County Medical Society; aged 53; died December 27.

MISSOURI STATE MEDICAL ASSOCIATION

The 95th Annual Session of the Missouri State Medical Association will be held in the Municipal Auditorium, Kansas City, April 26, 27, 28 and 29, 1953.

SCIENTIFIC PROGRAM

Monday, April 27, 8:00 a. m., Little Theater, Municipal Auditorium

8:00 a. m. Motion Pictures.
9:00 a. m. Functional Disorders of the Bowel, Carl R. Ferris, M.D., Kansas City.
9:30 a. m. Therapy of Heart Failure, T. Reid Jones, M.D., Kansas City.
Intermission to View Exhibits.

Section on Chest Diseases

10:30 a. m. Newer Chemotherapy of Tuberculosis, Carl Pfuetze, M.D., Chicago.
11:00 a. m. Pulmonary Hemorrhage, Thomas M. Burford, M.D., St. Louis
11:30 a. m. Bronchiectasis, James L. Mudd, M.D., St. Louis.

Section on Obstetrics

10:30 a. m. The Management of Eclampsia: A Clinical Evaluation of the Several Therapeutic Schedules, Willis Brown, M.D., Little Rock, Arkansas.
11:00 a. m. The Diagnosis of Pelvic Tumors, William C. Mixson, M. D., Kansas City.
11:20 a. m. Extrauterine Pregnancy, Leo J. Hartnett, M.D., St. Louis.
11:40 a. m. Surgical Complications in Pregnancy, Joseph L. Johnston, M.D., Springfield.
12:00 noon. Round Table Luncheon. Hotel President.
1:30 p. m. Motion Pictures.
2:00 p. m. Management of Chronic Obstruction to the Lymphatic and Venous Channels, Darrell Campbell, M.D., Ann Arbor, Michigan.
2:30 p. m. Emotional Problems of Childhood: Their Management in General Practice, Cotter Hirschberg, M.D., Topeka, Kansas.
3:00 p. m. Responsibilities of the Medical School to the State It Serves, W. Clark Wescoe, M.D., Kansas City, Kansas.
Intermission to View Exhibits.
4:00 p. m. House of Delegates.

Tuesday, April 28, 8:00 a. m., Little Theater, Municipal Auditorium

8:00 a. m. Motion Pictures.
9:00 a. m. The Importance of Anesthesia Technics in the Poor Risk Patient, Charles R. White, M.D., Kansas City.
9:30 a. m. Immediate Care of Facial Injuries, Douglas Macomber, M.D., Denver, Colorado.
Intermission to View Exhibits.

Section on Metabolic Diseases

10:30 a. m. Electrolyte and Fluid Balance From a Practical Standpoint, Harry Statland, M.D., Kansas City.
11:00 a. m. Differential Diagnosis of Edemas, Jack Hill, M.D., Kansas City.
11:30 a. m. Present Concepts in the Treatment of Hyperthyroidism, Arnold Jackson, M.D., Madison, Wisconsin.

Section on Pediatrics

10:30 a. m. Pediatric Emergencies in the Newborn, Sydney S. Gellis, M.D., Boston, Massachusetts.
11:15 a. m. Pediatric Emergencies in the Older Child, Herbert C. Miller, M.D., Kansas City, Kansas.
12:00 noon. Round Table Luncheon. Hotel President.
1:30 p. m. Motion Pictures.
2:00 p. m. Diagnosis in Heart Disease, John Mayer, M.D.; Martin Mueller, M.D.; Bryce Ballard, M.D.; Clark Sealy, M.D.; Blaine Hibbard, M.D.; Edward H. Stratemeier, M.D., Kansas City General Hospital, Kansas City.
Intermission to View Exhibits.
3:30 p. m. Common Genito-urinary Problems: Their Diagnosis and Treatment, Stoughton White, M.D., Kansas City, Coordinator.
Participants: Irwin S. Brown, M. D., Kansas City.
John F. Patton, M.D., St. Louis.
Grayson Carroll, M.D., St. Louis.

Wednesday, April 29, 8:00 a. m., Little Theater, Municipal Auditorium

8:00 a. m. Motion Pictures.
9:00 a. m. Principles of Geriatric Medicine, William B. Kountz, M.D., St. Louis.
9:30 a. m. Medical Aspects of Thyroid Disease, Charles M. Blackburn, M.D., Rochester, Minnesota.
Intermission to View Exhibits.

10:30 a. m. Sex Hormone Therapy in General Practice, Daniel L. Sexton, M.D., St. Louis.
11:00 a. m. Panel on Trauma.
Participants: Abdominal Injuries, Gene Starkloff, M.D., St. Louis.
Orthopedic Injuries, W. J. Stewart, M.D., Columbia.
Genito-urinary Injuries, James Cope, M.D., Columbia.
1:30 p. m. House of Delegates.

THE COUNCIL

The Council met at the Sheraton Hotel, St. Louis, on November 29, 30, 1952, with Victor B. Buhler, M.D., Kansas City, Chairman, presiding. Those present were Drs. Buhler, J. W. Thompson, St. Louis; H. E. Petersen, St. Joseph; C. E. Hyndman, St. Louis; Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; R. O. Muether, St. Louis; John O'Connell, Overland; J. Loren Washburn, Versailles; R. W. Kennedy, Marshall; W. S. Sewell, Springfield; Frank W. Hall, Cape Girardeau; R. E. Schlueter, St. Louis; P. V. Siegel, Smithton; E. C. Ernst, St. Louis; Robert Mueller, St. Louis; Paul Johnstone, Kansas City; Henry Allen, St. Louis; James R. Amos, Jefferson City; A. E. Spelman, Smithville; A. S. Bristow, Princeton; Mr. Lawrence Bradley, Kennett; Mr. D. E. Caywood, Springfield; John R. Buckner, Springfield; Messrs. Lemoine Skinner, James Koenig, Raymond McIntyre and T. R. O'Brien, St. Louis.

Better Business Bureau

On motion of Dr. Kennedy, it was voted to contribute $100.00 to the Better Business Bureau, the usual dues paid by the Association.

Regional A.M.A. Conference

Dr. Thompson reported on a regional conference of the A.M.A. Washington Office held in Omaha on Nov. 9. He said that one of the reasons for the conference was for Dr. Frank Wilson, the new director, to become acquainted with individuals and their thinking throughout the country. Topics discussed at the conference included the Reed-Keogh bill, the waiver of premium bill, treaty laws as they can supersede state or federal laws and bypass Constitutional mandates or federal laws and bypass Constitutional mandates or state statutes; the draft law and the I.L.O.

Petition of Pettis County

Mr. O'Brien read a petition of the Pettis County Medical Society asking that that county be placed in the territory of the Kansas City Blue Cross and Blue Shield rather than the St. Louis area, in which they are now covered. This was discussed by most of the Council, it being brought out that the ideal situation would be for coverage to be the same in both plans or a combination of the plans, and that enrollment practices be liberalized, but also that the Council actually had no jurisdiction as to territory. On motion of Dr. Petersen, the Council recommended to Dr. Siegel that the Pettis County Medical Society take its petition direct to Blue Cross-Blue Shield.

Treasurer's Report

The Treasurer made a brief report and stated that fuller financial information would be made available through the Budget Committee which would report later.

Medical Record Librarians

Mr. O'Brien read a letter from the Medical Record Librarians asking approval of their work, especially in attempting to work in smaller hospitals in the state. After discussion in which this work was praised, on motion of Dr. Petersen, the Council voted to approve the work and encourage the group in their efforts.

Audrain Hospital Case

Mr. Bradley stated that it was possible that a decision on the Audrain County Hospital case would be handed down in the very near future. It was decided that copies of the decision should go to all councilors as soon as possible and that a digest of the decision should be sent to all members of the Association.

Field Secretary's Report

Mr. McIntyre reported on various meetings since the last Council session, together with a report on the variation on attendance at meetings. He displayed a map showing the unorganized counties in the state and pointing out the advisability of certain hyphenations as follow: Wayne, hyphenate with Butler; Bolinger, hyphenate with Cape Girardeau; McDonald and Newton, hyphenate with Ozarks; Ozark, hyphenate with South Central; hyphenate Cass, Bates, Henry, Vernon-Cedar and St. Clair; hyphenate Cooper, Morgan, Moniteau and Howard; hyphenate Miller and Osage with Cole; hyphenate Shelby with Marion-Ralls; hyphenate Andrew and Holt with Nodaway-Atchison-Gentry-Worth; hyphenate Clay, Clinton and Platte; hyphenate Audrain, Callaway and Montgomery; hyphenate Benton, Johnson, Pettis and Saline; hyphenate Lincoln and St. Charles. Move Ripley County from District 9 to 10 and hyphenate with Butler and Wayne; move Camden County from District 5 to 9 and hyphenate with Laclede; move Maries County from District 5 to 9 and hyphenate with Phelps-Crawford-Dent-Pulaski. On motion, Mr. McIntyre was instructed to follow up study on these hyphenations, talking to the county societies and the Councilor Districts involved.

Cancer Committee Report

Dr. Ernst reported that the Committee on Cancer had been in close touch with cancer work in the state; that the Barnard Hospital has been taken over by Washington University; that the Missouri Division of the National Cancer Society had been reorganized and had formed a service committee which would work closely with the Committee on Cancer of the Association and stated that this committee would be carefully appointed in order to carry out this work.

SULFA*CETAMIDE*

SULFADIAZINE

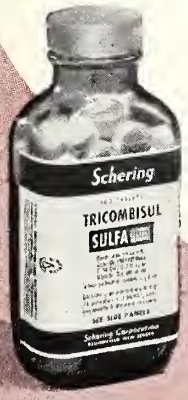
SULFAMERAZINE

the "extra advantage"
in this triple sulfonamide is
sulfacetamide

TRICOMBISUL® (acet-dia-mer-sulfonamides-Schering) provides not only sulfadiazine and sulfamerazine — standard components of almost all triple sulfonamide mixtures — but also sulfa*cetamide.*

Sulfacetamide brings to the combination extremely high solubility, high bacteriostatic activity, and greater safety for the urinary tract.

TRICOMBISUL



Schering CORPORATION • BLOOMFIELD, N. J.

TRICOMBISUL

Advisory Committee to S.S.S.

Dr. Allen said that the Selective Service System was having a difficult time in obtaining physicians to replace those that have been in service for two years; that soon after the first of the year they probably would begin calling in priority 3 men. He said that the Army would prefer the younger men in priority 4 rather than the older men in priority 3, which is causing some difficulty. He said that with the draft law expiring on June 30, he expected that there would be legislation prior to that time.

Committee on Publication

The Chairman appointed the following Committee on Publication, which was approved by the Council: Drs. Vincent T. Williams, Kansas City, Chairman; R. O. Muether, St. Louis; Paul O. Hagemann, St. Louis; M. D. Overholser, Columbia; and John P. Ferguson, Springfield.

Employee Retirement Plan

A retirement insurance program for employees as approved by the Council in 1944 and subsequently approved by the House of Delegates was recommended placed in effect for Mr. T. R. O'Brien and Mr. Raymond McIntyre effective January 1, 1953, by the special committee appointed for this study, Drs. Hyndman, Bohrer and Buhler. The Committee also recommended that the Budget Committee include the amount necessary to place the program in effect in the 1953 budget. On motion, both recommendations were approved.

Budget

The following budget was presented by the Budget Committee and after discussion approved by the Council:

Budget for 1953

Salaries	$ 32,100.00
Journal Expense	24,340.00
Postage, Printing & Stationery	4,000.00
Travel, Executive Secretary	1,300.00
Travel, Field Secretary	2,800.00
Telephone and Telegraph	1,500.00
Office rent and light	3,000.00
Meetings and Committee expense	14,000.00
Defense	500.00
Scientific and Postgraduate work	1,000.00
Woman's Auxiliary	775.00
Public Relations	7,500.00
Insurance annuity	2,754.00
Miscellaneous general expense	2,600.00
Furniture and fixtures	1,500.00
Social Security Tax	425.00
Total	$100,094.00

Report of Committee on Cardiac Diseases

The report of the Committee on Study of Cardiac Diseases was presented by Mr. O'Brien, including resolutions on contacting voluntary agencies in the field of cardiac disease and inviting the assistance of these agencies in integrating future proposed programs in the state, and expressing the willingness of the Committee to consult with and advise the Missouri

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

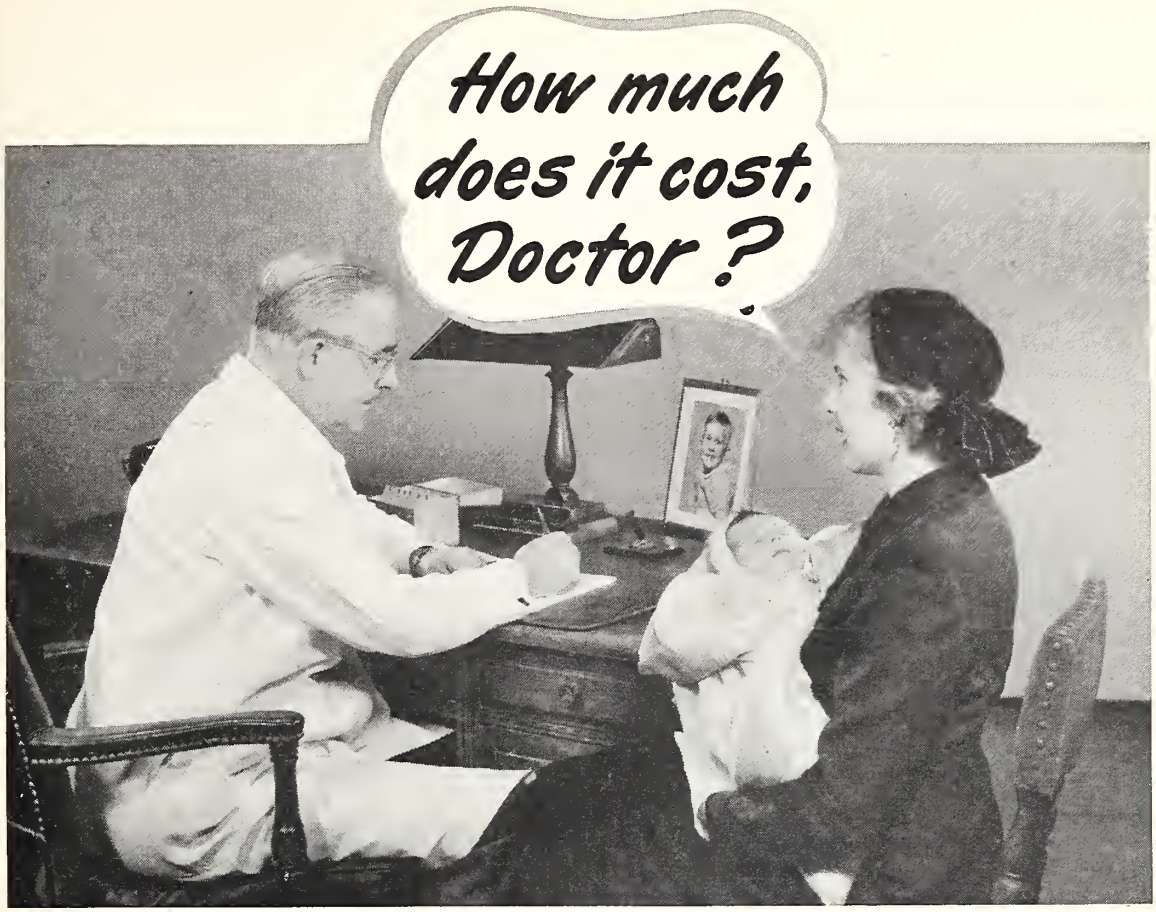
Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
HOMER V. CAPPARELL, M.D.
LEROY E. BOSTIAN, M.D.

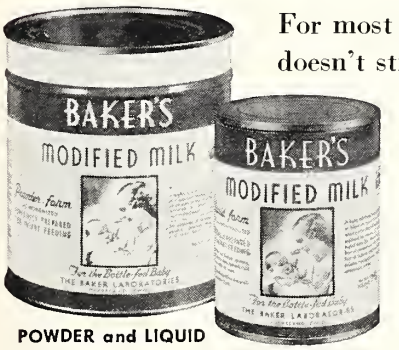
G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*



WHEN prescribing an infant feeding formula, you have doubtless often been asked by the mother, "Is it expensive?"

For most families—especially those with children—today's dollar doesn't stretch far. Hence the anxiety of mothers concerning cost.



POWDER and LIQUID

Made from Grade A milk (U. S. Public Health Service Milk Code) which has been modified by replacement of the milk fat with animal and vegetable oils and by the addition of carbohydrates, vitamins and iron.

Sold at an extremely low price, Baker's provides a relatively high protein content (an ample supply of essential amino acids), four sugars, added iron and adequate amounts of vitamins A, D, thiamine, niacin and riboflavin. With Baker's, there's no need to prescribe additional vitamins (except C).

Yet the average cost of feeding most infants on Baker's is only about $1.50 per week. An economical answer to the question, "How much does it cost, doctor?"

BAKER'S MODIFIED MILK

THE BAKER LABORATORIES INC.

Main Office: Cleveland, Ohio
Plant: East Troy, Wisconsin

Division Offices: Atlanta, Dallas, Denver, Greensboro, N. C., Las Angeles, San Francisco, Seattle

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

Division of Health in matters relating to control of cardiac disease.

He stated that the committee met a short time ago and studied various heart programs in the state and had approved a radio program "Know Your Heart," and also had approved the educational program which was sponsored by the Association and presented by St. Louis University through the assistance of the State Division of Health. On motion the report was accepted.

Division of Health

Dr. Amos reported on the work of the Division of Health and presented the problem of tuberculosis care, as to whether more hospitals were needed, whether present facilities should be enlarged or whether some care should be sought in present general hospitals as well as care of rural patients in Koch and Leeds Hospitals. After discussion, on motion, it was decided that this situation needed further consideration and it was voted to refer it to the Committee on Tuberculosis with the request that the Committee meet with Dr. Amos and present a report on its findings to the Council.

Improvement of Patient Care

Dr. Paul Johnstone reported on meetings of the Missouri Conference and on a fourteen state conference held recently. On motion, approval was voted for Missouri to continue representation in this fourteen state area conference. Dr. Johnstone reported that a letter to legislators regarding tax deduction for hospital care brought, in the main, favorable replies. He asked that Mr. O'Brien act as chairman of the committee to inform the people of Missouri on these recommedations to the legislators.

Dr. Johnstone stated that a definition for "chronic hospital beds" had been sought and that the following resolution had been drawn from the information obtained:

Resolutions

1. *Be it Resolved,* That the definition of a Hospital furnished by the Commission on Chronic illness is endorsed. It is as follows: a "Hospital is defined as any institution, public or private, providing beds, facilities and services over a continuous period of 24 hours for the observation, treatment and for care of two or more non-related individuals suffering from illness, injury, deformity or abnormality; which maintains diagnostic and/or therapeutic facilities; where care or treatment is administered by or under directions of persons licensed to practice medicine."

2. *Be it Resolved,* That the United States Public Health Service definition of a Chronic Disease Hospital is endorsed. It is defined as "A hospital, the primary purpose of which is medical treatment of chronic illness, including the degenerative diseases, and which furnishes hospital treatment and care, administered by or under the direction of persons licensed to practice medicine in the State. The term includes such convalescent homes as meet the foregoing qualifications. It excludes tuberculosis and mental hospitals, nursing homes, and also institutions, the primary purpose of which is domiciliary care."

3. *Be it Resolved,* That the definition of a chronic bed in a hospital as furnished by the Commission on Chronic Illness is endorsed. It is defined as follows: "a Chronic bed in a hospital is one that has been specifically planned in terms of needs of the chronically ill person and is reserved for use of such persons."

4. *Be it Resolved,* That it is recognized that the treatment of many chronic diseases requires every physical facility and type of personnel of a general hospital; and that the technique of treatment is often similar. However, it is also recognized that additional facilities appropriate for the management of chronic illness is required. These include recreational and occupational therapy, physical therapy, informal "homelike" surroundings privacy, etc. as opposed to the more demanding medical, surgical and nursing requirements of the acutely ill.

5. *Be it Resolved,* That it is recognized that many patients suffering from chronic diseases require hospital treatment for only a few days; but that many others require hospital treatment for longer than thirty days. It is also recognized that when continuous hospital treatment is required for longer than thirty days, that commonly and as a rule the medical problem involved is in the chronic disease group.

6. *Be it Resolved,* That the United States Public Health Service regulation "Priority may be given to those projects in which the chronic disease facilities will be operated as sub-units of general hospitals," is regarded as particularly applicable to the State of Missouri.

On motion of Dr. Hall, the resolution was approved.

Dr. Johnstone explained the proposed nursing act which amends the present act to include practical nurses. This act was approved by the Council on October 4. He stated that letters would be sent by the Conference, together with copy of the bill, to legislators urging passage of this bill. Dr. Johnstone said that the conference felt that it was best that drastic legislation concerning nursing homes not be invoked at this time. He called attention to an article in the JAMA of October 25 on "Impact of Medical Plans on the Medical Profession" and discussed that financing of care of patients at the University of Missouri. This was referred to the Committee on Medical Economics, which already has this under study.

Rural Medical Service

Dr. Spelman gave the following report for the Committee on Rural Medical Service:

The overall picture of existing health units leaves the committee with the idea that these units, in some cases, are of value and in others, at best, are doing no good. Their usefulness seems in proportion to the interest the local doctors have in them, and in locations in which doctors are not taking an active interest there is a tendency for the public to attempt to create an organization to practice medicine.

Where the unit has trained public health doctors and nurses directing the organization, the usefulness of the organization is serving its best purpose.

It seems apparent to the committee that health units could be an opening wedge to extensive practice of medicine by groups called in from outside the community under the guise of various health organizations. The committee does not argue against this on the basis of competitively injuring private practice, but does object that such practice, in its overall aspect, decreases the quality of medicine and thus is injurious to public welfare.

To the committee it seems the usefulness of health units can be maintained and the dangers avoided only

"... and be sure to take your VITAMINS!"

When the management of heart disease requires caloric or salt restriction, vitamin intake may be decreased because of unpalatability or inadequate volume of food. A balanced vitamin preparation offers a dependable method for guarding against such an eventuality.

MERCK & CO., INC., RAHWAY, N. J.—as a pioneer manufacturer of Vitamins—serves the Medical Profession through the Pharmaceutical Industry.

©Merck & Co., Inc.

if sufficient interest can be gained among the local doctors to cause them to be active participants in helping to direct the health unit.

Enlightening the local doctor is necessary and can best be accomplished by the district councilor meeting with county societies and discussing with them the health council and health unit plan.

Much better use of the Missouri State Medical Journal could be made to aid the individual doctor in understanding his opportunities and responsibilities in health units. Stress should be made on the point that doctors should not attempt to mandatorily direct health councils and health units. These organizations are for the general public to direct and will be failures unless the people of a community themselves have the interest and energy to promote them. The doctor, by participating, can guide and encourage healthy development.

The committee therefore recommends the Council go on record as supporting the idea and encouraging county medical societies to lend assistance to their development and operational direction.

This was discussed by Drs. Amos, Sewell and Buhler, who suggested that a synopsis of the law be published in The JOURNAL. On motion of Dr. Francka, the report was accepted.

Marion-Ralls-Shelby County Medical Society

Upon motion of Dr. Francka, the hyphenation of the Marion-Ralls and the Shelby county medical societies was approved as the Marion-Ralls-Shelby County Medical Society.

COUNCILOR DISTRICT NEWS

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Buchanan County Medical Society

On Wednesday night, December 3, the Buchanan County Medical Society held its annual election of officers meeting at New Edgewood, St. Joseph. The 1953 officers elected are: **Jacob Kulowski**, M.D., president-elect; **Wilbur P. McDonald**, M.D., vice president; **Allen I. Herman**, M.D., secretary; **William J. Hunt**, M.D., treasurer; **M. E. Grimes**, M.D., censor; **John R. Forgrave**, M.D., public policy chairman; **O. Earl Whitsell**, M.D., trustee for one year; **Judson M. Hughes**, M.D., trustee for five years; **Claude S. Grant**, M.D., retiring president, executive secretary of the governing committee, and **L. Paul Forgrave**, M.D., delegate to the Missouri State Medical Association.

Dr. Hunt was named treasurer for the twelfth time and Dr. Herman was elected secretary for a fourth term.

These officers and **F. Gregg Thompson, Jr.**, M.D., president for 1953, were installed at a dinner meeting on December 10 at the New Edgewood.

ALLEN I. HERMAN, M.D., *Secretary.*

Grand River Medical Society

A dinner meeting of the Grand River Medical Society was held at the Strand Hotel, Chillicothe, on January 8.

William R. Eubank, M.D., Kansas City, spoke on "The Glaucomas" and **George Mandler**, M.D., Chillicothe, gave a case presentation and discussion of some otolargngologic problems.

The Society has set for its regular meeting date the second Thursday of every month.

Officers elected for 1953 are: President, **Virgil Vandiver**, M.D., Chillicothe; first vice president, **John Platz**, M.D., Carrollton; second vice president, **W. A. Broyles**, M.D., Bethany; secretary-treasurer, **E. A. Duffy**, M.D., Trenton; member of board of censors, **Ralph Bohnsack**, M.D., Brookfield.

E. A. DUFFY, M.D., *Secretary.*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

U. S. Senator Stuart Symington, St. Louis, was the guest speaker at the annual dinner meeting of the Society on December 11, at the Moberly Country Club. Mrs. Symington, wives of members of the medical society and other special guests, making a total of some two hundred people, were present for the occasion which began at 6:30 p.m.

Senator Symington was introduced by former State Senator Richard Chamier of Moberly.

P. V. Dreyer, M.D., Huntsville, retiring president of the Society, presided over the meeting and introduced the officers for 1953: President, **F. L. Harms**, M.D., Salisbury; vice president, **James E. Campbell**, M.D., Macon; secretary-treasurer, **C. C. Cohrs**, M.D., Moberly.

Meeting of January 8

On January 8 the Society held its first meeting of the New Year at the Woodland Hospital, Moberly.

C. Barber Mueller, M.D., St. Louis, presented the scientific program. His subject was "Electrolyte and Water Imbalance."

C. C. COHRS, M.D., *Secretary.*

FIFTH COUNCILOR DISTRICT

J. LOREN WASHBURN, VERSAILLES, COUNCILOR

Audrain County Medical Society

The December meeting of the Audrain County Medical Society was held at the Audrain County Hospital on December 18.

Hollis Allen, M.D., St. Louis, and **Herbert Wiegand**, M.D., St. Louis, presented an interesting and informative discussion on "the Leukemias."

HARRY F. O'BRIEN, M.D., *Secretary.*

Cole County Medical Society

At a meeting of the Cole County Medical Society on December 16, **Earl L. Loyd**, M.D., Jefferson City, was elected president for 1953. He succeeds **J. G. Bruce**, M.D., Jefferson City. **R. H. Tanner**, M.D., Jefferson City, was elected vice president; **H. V. Guhleman, Jr.**, M.D., Jefferson City, secretary-treasurer; **John McHaney**, M.D., Jefferson City, delegate to the Missouri State Medical Association annual session and **E. R. Bohrer**, M.D., Jefferson City, alternate delegate.

H. V. GUHLEMAN, JR., M.D., *Secretary.*

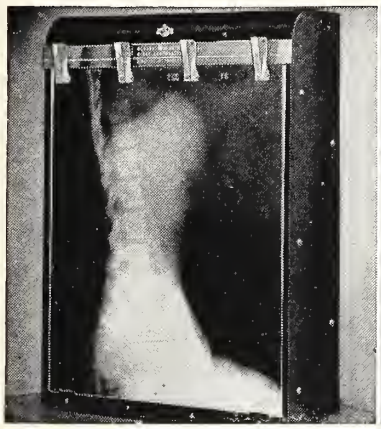
SIXTH COUNCILOR DISTRICT

R. W. KENNEDY, MARSHALL, COUNCILOR

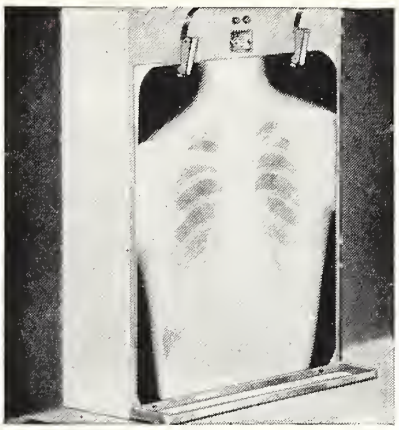
Lafayette-Ray County Medical Society

At the December meeting of the Lafayette-Ray

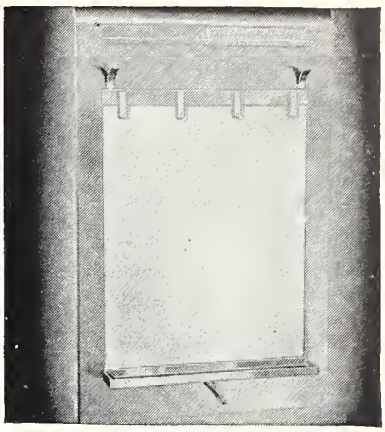
There's a GE viewer just right for you!



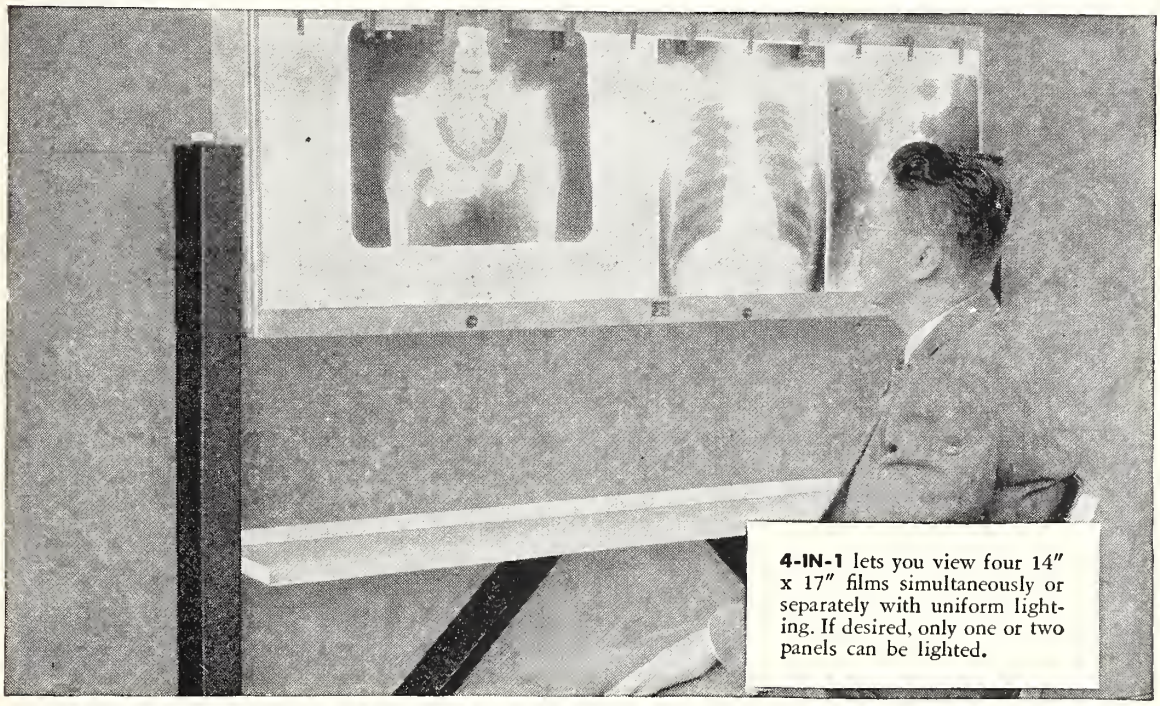
CIRCLINE — the best illuminator for general use. Named for the famous GE Circline Lamp that furnishes its top-notch, uniform illumination.



DUOLINE — a lighter, less expensive unit, yet with excellent illumination from two straight General Electric fluorescent lamps.



EXPLOSION-PROOF for operating rooms. Stainless steel throughout and, like the other GE illuminators shown, U/L approved.



4-IN-1 lets you view four 14″ x 17″ films simultaneously or separately with uniform lighting. If desired, only one or two panels can be lighted.

Yes, GE builds illuminators of every type. In addition to the four shown here, you can choose from 70 mm single-frame and stereo viewers . . . 4″ x 5″ and 4″ x 10″ single and orthostereoscopic viewers . . . GE High-Intensity viewers . . . dental viewers. For complete information, see your nearest GE x-ray representative, or write

You can put your confidence in —

GENERAL ELECTRIC

Direct Factory Branches:

KANSAS CITY — 1114 Grand Avenue **ST. LOUIS — 2010 Olive Street**

County Medical Society, **Joe Ward**, M.D., Lexington, was elected president-elect; **M. C. Johnson**, M.D., Richmond, secretary-treasurer; **W. E. Martin**, M.D., Odessa, and **I. E. Goldberg**, M.D., Braymer, delegates to the Missouri State Medical Association. **Melvin Masterson**, M.D., Richmond, is president of the Society for 1953.

M. C. JOHNSON, M.D., *Secretary.*

Pettis County Medical Society

The Pettis County Medical Society met at the Bothwell Memorial Hospital on December 1. The main order of business was the election of officers for 1953. Those elected are as follow: President, **P. V. Siegel**, M.D., Smithton; vice president, **Karl Gonser**, M.D., Sedalia; secretary, **Carl Siegel**, M.D., Sedalia; treasurer, **C. H. Brady**, M.D., Sedalia; delegate, **C. G. Stauffacher**, M.D., Sedalia, and alternate, **Carl Siegel**, M.D., Sedalia. **D. R. Edwards**, M.D., Sedalia, was elected to the board of censors for three years. **A. L. Walter**, M.D., Sedalia, holds over for one year and **Charles D. Osborn**, M.D., Sedalia, for two years.

Drs. **A. L. Walter** and **J. W. Boger**, Sedalia, were elected to the executive committee. The other members of the executive committee are Drs. **John Lamy**, Sedalia, immediate past president, **P. V. Siegel** and **Carl Siegel**, president and secretary respectively.

CARL SIEGEL, M.D., *Secretary.*

Barton-Dade County Medical Society

The Barton-Dade County Medical Society met at the office of Dr. **Rudolph Knapp**, Golden City, on Monday night, December 15. **Vern Bickel**, M.D., Lamar, gave the scientific part of the program. He discussed "Diseases of the Small Intestines."

LEE A. MCNEEL, JR., M.D., *Secretary.*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski County Medical Society

A dinner meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society was held in conjunction with a postgraduate session of the Missouri Academy of General Practice on Thursday night, December 4, at Rolla.

The meeting was held in the Pine Room of the Greyhound Bus Station and began with dinner at 6:00 p.m. A short business session of the society was held at 7:30 p.m.

The scientific program began at 8:00 p.m. with **James W. Allee**, M.D., Columbia, speaking on "The Medical Management of Colitis," and **John J. Modlin**, M.D., Columbia, discussing "The Diagnosis of Lesions of the Colon Through the Sigmoidoscope."

M. K. UNDERWOOD, M.D., *Secretary.*

South Central Counties Medical Society

The South Central Counties Medical Society held a dinner meeting on December 10 at the Anchor Cafe near Mountain View. The program was presented at the Memorial Hospital and the ladies spent the evening at the home of Dr. and Mrs. Skaggs.

Richard Webb, M.D., Springfield, spoke on "Peptic Ulcer" and **Don F. Gose**, M.D., Springfield, discussed "Pediatric Surgery."

The officers elected for 1953 were: President, **S. G. Kramer**, M.D.; president-elect, **M. B. Perkins**, M.D.; secretary-treasurer, **A. C. Ames**, M.D.; censor for three years, **T. R. Skaggs**, M.D., with **Dr. Kramer** holding over for two years and **Rollin H. Smith**, M.D., for one year. Delegates and alternates were elected as follows: Howell County, delegate, **C. P. Callihan**, M.D., alternate, **J. N. Wiles**, M.D.; Texas County, delegate, **Leslie Randall**, M. D., alternate, **S. G. Kramer**, M.D.; Oregon County, delegate, **C. W. Cooper**, M.D., alternate, none; Wright County, delegate, **R. W. Denney**, M.D., alternate, **S. W. Connor**; Douglas County, delegate, **M. C. Gentry**, M.D., alternate, none.

The next meeting will be held at West Plains on January 15.

A. C. AMES, M.D., *Secretary.*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Mineral Area County Medical Society

The Mineral Area County Medical Society met at State Hospital No. 4, Farmington, December 18. An interesting program was presented by **George Hawkins**, M.D., and **Vilray P. Blair**, M.D., St. Louis. Dr. Hawkins spoke on "Emergency Treatment of Trauma of the Head and Back," and Dr. Blair discussed "The Emergency Treatment of Fractures."

Officers of the Society elected for 1953 were **Marvin Grossman**, M.D., Fredericktown, president; **S. C. Slaughter**, M.D., Fredericktown, vice president, and **Byron Taylor**, M.D., Flat River, secretary-treasurer.

S. A. LANZAFAME, M.D., *Secretary.*

Butler County Medical Society

William E. Henrickson, M.D., Poplar Bluff, was elected president of the Butler County Medical Society for 1953 at a meeting of the Society held at the Dunn Hotel, Poplar Bluff, on December 11. **Robert Englehardt**, M.D., Poplar Bluff, was elected secretary-treasurer.

The scientific session of the meeting consisted of the following: A case presentation by **Dr. Baskett** of the Veterans Administration Hospital with an interesting differential diagnosis by **Dr. Hardin O. Henrickson**, Poplar Bluff, and a talk on "Hodgkins Disease" by **Henry Pinkerton**, M.D., St. Louis.

ROBERT ENGLEHARDT, M.D., *Secretary.*

SECLUSION MATERNITY

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

RADIUM & RADIUM D+E

(including Radium Applicators)

For All Medical Purposes

Est. 1919

Quincy X-Ray & Radium Laboratories

(Owned and Directed by a Physician-Radiologist)

HAROLD SWANBERG, B.S., M.D., Director

W. C. U. Bldg., Quincy, Illinois

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.

Ethical Pharmaceuticals

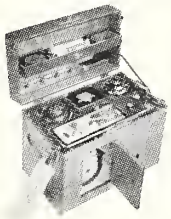
1929-31 O'Connell Ave. St. Louis 14, Mo.

TAKE ADVANTAGE OF YOUR LOCAL SANBORN SERVICE STATION

It stands ready to provide you with

- expert technician service on all Sanborn instruments
- emergency loan Sanborn instruments
- complete stocks of daily-use supplies and accessories

and to demonstrate



THE SANBORN **VISO** CARDIETTE

today's foremost electrocardiograph

Your local Service Center is:

SANBORN COMPANY *Branch Office*
634 North Grand Boulevard
St. Louis, Mo., *Phone* Lucas 7740

Industrial physicians wanted for large nationally known company.

"Employment in the Kansas City Area. Good Salary; Paid vacations and other benefit programs.

Write C. W. YOUNG
c/o Remington Arms Company, Inc.
Lake City Arsenal
Independence, Missouri

CLASSIFIED ADS

"BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290."

INDEX TO ADVERTISERS

Abbott Laboratories 97
American Cancer Society 150
American Meat Institute 127
Ayerst, McKenna & Harrison, Ltd. 114

Baker Laboratories 141
Bilhuber-Knoll Corporation 85
Blue Cross-Blue Shield 139

Camel Cigarettes 91
City View Sanitarium 152
Cook County Graduate School of Medicine 155

Dumas-Wilson & Co. 123
Duncan Laboratories 84

Fairmount Hospital 146

General Electric Company 145

Hamilton-Schmidt Surgical Co. 152

Katz Drug Co. 148
Keeley Institute 151
Knox Gelatine Co. 155

Lederle Laboratories, Inc. ..... Insert
Eli Lilly & Company 98

Mead Johnson & Company 160
Medical Protective Company 158
Merck & Company, Inc. 143
Mid-South Postgraduate Medical Assembly 153
Milwaukee Sanitarium 140

Neurological Hospital 147
Norbury Sanitarium 157
North Shore Health Resort 156

O'Connell Bros. Inc. 157

Parke, Davis & Company 82, 83
Chas. Pfizer & Company, Inc. 159
Physicians Casualty Association 156
Mary E. Pogue School 152
Producers Creamery Company 151

Quincy X-Ray & Radium Laboratories 157

Ralph Sanitarium 149
Remington Arms Co., Inc. 157
Research Clinic 150

Sanborn Company 157
Schering Corporation 87
Schieffelin & Co. 155
G. D. Searle & Co. 113
Smith-Dorsey 124
E. R. Squibb & Sons 128

University of Kansas School of Medicine 150
Upjohn Company 95
U. S. Brewers Foundation, Inc. 126

The Wander Company 154
West Texas Maternity Hospital 152
Winthrop-Stearns, Inc. 93
Dorothy Worrell 158
Wyeth, Inc. 89

Zemmer Company 152

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures *"know-how"*

ST. LOUIS Office:
T. E. Mentzer, Rep.,
3738 Wash. Blvd., Tel. Newstead 8363

KANSAS CITY Office:
Robert M. Childers, Rep.,
1319 West 44th Terrace Apt. 106
Telephone Jefferson 2910

Curiosa et Trivia

William B. McCunniff, M.D.

Warfarin (revolutionary rat poison) has nothing to do with warfare. It is derived from the initials of Wisconsin Agricultural Research Foundation, plus the last four letters of dicoumarin, from which it is produced.

ACTH too expensive? Thirty doses of the drug are extracted from 1,360 hog pituitary glands!

In the Second Century B. C., hemophilia was mentioned in the Talmud as a justifiable excuse for not performing circumcision.

Sideline of the Month: The largest purebred classified Holstein dairy herd in the United States is owned by the Colorado State Hospital in Pueblo.

The first quarantine in history was imposed in London in 1665 when bubonic plague (The Black Death) descended on the city. And high time! About seventy thousand citizens perished.

You've had delirious patients you couldn't get back in the groove? More background than you realize . . . the word "delirium" is derived from *de* (from or out of) and *lira* (the furrow).

"Nanny" was recommended and used by Army surgeons during the Indian Wars (1789-1795) for "measles and other eruptive fevers." Prescription? Simple—sheep-dung tea!

Carbon 14 when used as a tracer in diagnosis can be detected and measured when diluted as high as one part in ten million.

Too many ciphers in "ten million"? Consider that the estimated net on sales of antihistamines for "cold cures" in 1950 was one hundred million!

No nurse, doctor or dentist has contracted Hansen's disease in the fifty-seven years that Carville (Louisiana) Leprosarium has been operating.

Naturally, you "peritonealize" raw surfaces in surgery. So did we until we discovered there is no such word! It's p-e-r-i-t-o-n-i-z-e.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

ILO a Peril to Free Medicine

E. J. McCormick, M.D.
President-Elect, American Medical Association

A serious threat to the practice of medicine in the free countries of the world lies in the prodigious texts of the International Labor Organization Conventions on social security and maternity protection which were adopted at the 35th Conference in Geneva last June. Copies are now available from the ILO office, 1825 Jefferson Place, Washington 6, D. C.

While the momentous proposals of the ILO are dangerous to every practicing American physician, it is likely that some day they will be submitted to the U. S. Senate for ratification. Any such contemplated plan calls for aggressive resistance from doctors everywhere.

The proposals are dangerous because they can change the whole concept of medical practice throughout the world.

ILO means International Labor Organization, an affiliated agency of the United Nations. It comprises some sixty odd member-governments, including the United States.

The ILO is one of the oldest and most important of the maze of International organizations functioning today, and the American Medical Association has been watching its work for years. On the basis of action taken in Geneva, it is evident that the ILO has become the seductive front in a world drive for socialized medicine. Many physicians, I am sure, do not realize the impact of its decisions.

To acquaint you briefly with the background, the ILO approved last June a Convention on minimum standards of social security in nine fields—medical care, sickness benefits, unemployment benefits, old-age benefits, employment injury benefits, family benefits, maternity benefits, invalidity benefits and survivor benefits. Approval came over objections of many employer delegations.

The catch is—and many people are not aware of it—that "Convention" actually means treaty. Under our Constitution, once a treaty is ratified by the Senate, it supercedes and takes legal precedence over both the Constitution and all laws on the subject. Thus, by the simple device of ratifying a treaty developed by a preponderance of non-Americans, this nation can have socialized medicine thrust upon it overnight, whether it likes it or not. We, as physicians, must not let this happen. We must do everything in our power to point up the dangers of any such maneuvering.

A significant point to remember is that the treaty can be considered operative under the agreement when a government promises to meet the requirements in four of the nine categories.

While some sources claim that it is unlikely that the United States will approve ratification, under the provisions there is no time limit. It can be brought up for a vote in this or any subsequent Senate and, if passed, its provisions will become applicable to all. It could be passed without senators even reading it.

The State Department and the President will decide whether to submit the Convention to the Senate for ratification.

The next time you chat with your senator or write him, be sure to express your views about the ILO and its proposed regulations. Let him know that personal freedom and personal responsibility are part and parcel of our way of life and that you favor an amendment to the U. S. Constitution which would prohibit agreements or treaties regulating any of the purely domestic affairs of the United States.

Others Say

Pledge and Performance

As citizens and doctors we must be earnestly determined to do our part. We must choose for leadership in our own ranks men whose qualifications for such position include broad vision and sound reasoning, men who have an understanding of those principles in our American tradition of government which are fundamental in the national life of our people. One of these social beliefs is that assistance through agency aid should be given only to those who need it and those who do not should be given encouragement and opportunity to make provision for themselves, either through thrift or through voluntary insurance. We believe that such doctrine is found in the aims of those who have been chosen as our leaders in government for the next four years.

The planning of the future of our Society can never be ended. In this consideration we cannot be better guided than by the wisdom of Woodrow Wilson, who said: "The history of Liberty is a history of limitations of governmental powers, not the increase of it. When we resist, therefore, the concentration of power, we are resisting the processes of death, because concentration of power is what always precedes the destruction of human liberties."—*J. Connecticut M. Soc.*

What Nature Does for the Oyster . . .

AMPHOJEL® does for the peptic ulcer. Local physical protection by AMPHOJEL'S demulcent gel, plus the effect of its antacid component, hasten healing and relief of pain.

Wyeth®
Philadelphia 2, Pa.

AMPHOJEL®—Aluminum Hydroxide Gel (Alumina Gel) Wyeth

With Our G. P.'s

WILLIAM J. SHAW, M.D.

The general practitioner, about whom Osler has said, "He is the standard by which we are measured and the estimate of the profession in the eyes of the public is their estimate of him," will not lose stature this month.

William J. Shaw, M.D.

From March 23 to 26 inclusive, St. Louis will be host to the American Academy of General Practice at the fifth annual scientific assembly. A program will be presented at that meeting that no general practitioner in Missouri can afford to miss. Formal credit hours will be given to Academy members for attendance.

The House of Delegates will seat Drs. K. Glover, Mt. Vernon, president of the Missouri Academy, and C. Martin, St. Louis, president of the St. Louis Academy, as active delegates for Missouri. Alternate delegates will be Drs. A. E. Spelman, Smithville, and W. O. Mowrey, St. Louis. Drs. Wm. Wagenbach, St. Louis, president-elect, and P. V. Siegel, Smithton, secretary-treasurer of the Missouri Academy, will represent Missouri at the state officers conference.

Drs. R. C. McElvain, St. Louis, and M. B. Casebolt, Kansas City, both past presidents of the Missouri Academy and founder members of the American Academy, will be present to assist neophytes in traversing the maze of meetings, banquets and entertainment dispensed at this assembly which is expected to excell all previous national assemblies.

Mrs. N. J. Eversoll and Mrs. John O'Connell have been named as chairmen of the ladies entertainment committee for the assembly. A fashion show, luncheon and sight-seeing tour culminating in a tea at the Art Museum are included in the plans to keep visiting wives entertained until the banquet which they will attend with their husbands on the final night of the meeting.

Many old friends will be seen, recent developments in medicine discussed, relaxation from the daily grind obtained and the stature of the general practitioner increased in St. Louis this month. A large general practitioner attendance will help raise the "standard by which the profession is measured."

Crossroads Comment

P. V. SIEGEL, M.D.

Dear Uncle Ted:

I have been putting off writing to congratulate you on your new job as Editor of the Journal until I had seen a couple copies. Not only did I see them but I read them from cover to cover. Reading MISSOURI MEDICINE somehow seems better than reading the JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION. There was everything from good instructive scientific articles to a good belly laugh. I would like to be among the first subscribers to Dr. Lamar's CAUL GIRL!

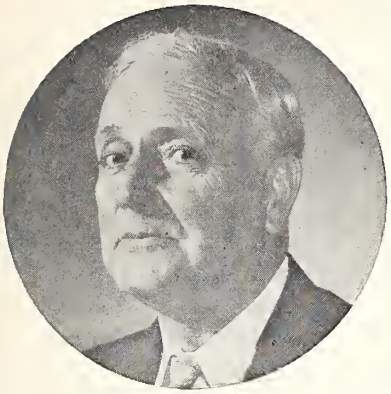
I guess you would say an editor has a job, at least Grandpa would have called it that. He always said a job had a lot of hard work attached to it and when a feller got a position he quit work and let somebody else do it. Come to think of it everyone in our local union must want a position because damn few want to do any work. There is a lot of work and plenty of headaches in the job you got yourself into now.

Down here in the country we are always glad to see a change, especially when the change is in a western direction. Think maybe the big union might remember what Horace said and move more of it out west, about half ways across the state. MISSOURI MEDICINE would then be where it could expand.

Might I be so bold as to suggest an addition? I would like to know what goes on in the front office. Something like a comment from the Executive Secretary as to what has happened in the past month. True enough, we do get letters from him along, but a paragraph or so would make us more sure he is earning his money.

Here is looking ahead with the change—for a bigger and better MISSOURI MEDICINE.

Your devoted nephew,
PETE



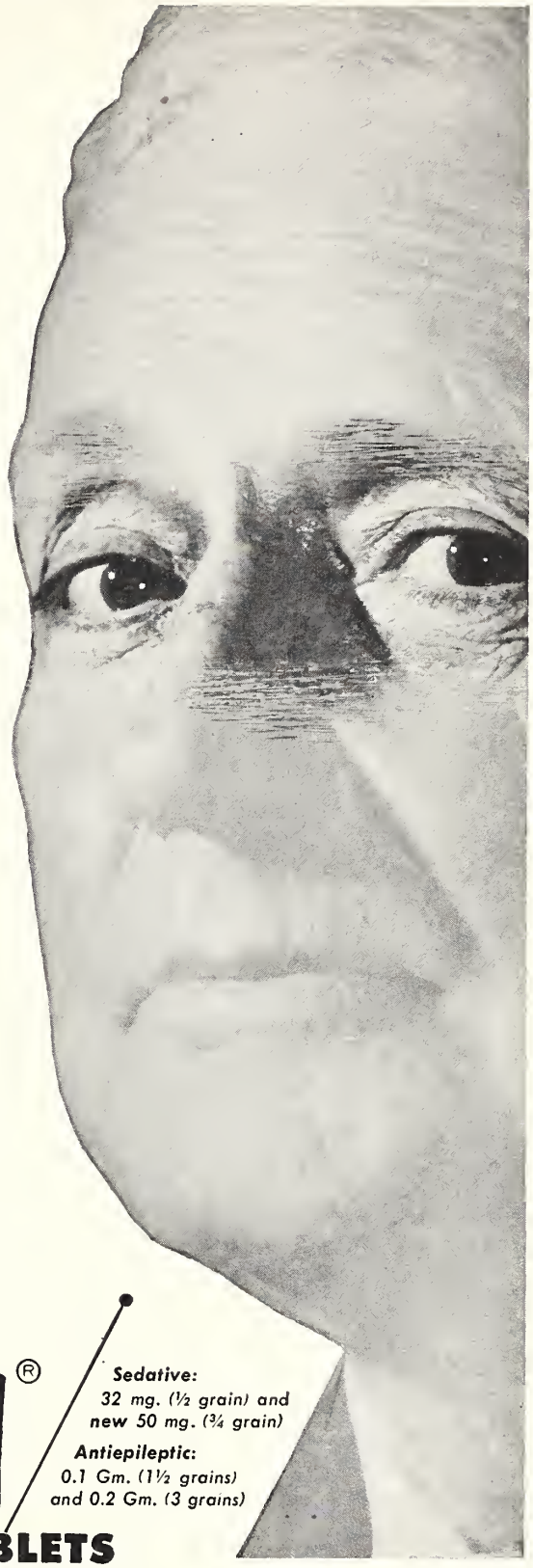
Relaxed but awake

In emotional and nervous disorders, Mebaral exerts its calming influence without excessive hypnotic action.

Mebaral is also a reliable anticonvulsant.

INDICATIONS:

Because of its high degree of sedative effectiveness, Mebaral finds a great field of usefulness in the regulation of agitated, depressed or anxiety states, as well as in convulsive disturbances. Specific disorders in which the calming influence of Mebaral is indicated include neuroses, mild psychoses, nervous symptoms of the menopause, hypertension, hyperthyroidism and epilepsy.



for sedation

Mebaral®

Tasteless **TABLETS**

Sedative:
32 mg. (½ grain) and new 50 mg. (¾ grain)

Antiepileptic:
0.1 Gm. (1½ grains) and 0.2 Gm. (3 grains)

WINTHROP-STEARNS INC. New York 18, N.Y., Windsor, Ont.

Mebaral, trademark reg. U. S. & Canada, brand of mephobarbital

Forty Years Ago

Clyde P. Dyer, M.D.

March, 1913: optometry bill, opposed by many county medical societies, defeated in the Legislature . . . House Bill 650 sponsored by chiropractors, endeavoring to escape restrictions of medical laws, reported unfavorably by committee . . . another, H.B. 854, seeking to legalize practice of "Suggestive Therapeutics," sponsored by the Weltmer Institute of Nevada . . . MSMA represented by Doctors Funkhouser, Lutz, McComas, McAlester, Jr., Behrans, Allee, Goodwin and the physician members of the House.

Clyde P. Dyer, M.D.

St. Louis referred to as the hot-bed of the proprietary nostrum business . . . Red Cross has asked component societies of the State Association to appoint local committees to work with them for immedate relief in times of disaster . . . efforts to eradicate practices that do not comport with the dignity of the profession, such as contract practice, have been instigated . . . bill to appoint a state alienist failed to pass in the House . . . Chariton County Medical Society has adopted resolutions requesting the State Association to increase dues . . . Governor Major reappointed Dr. Baysinger, Rolla, to the Board of Curators of the University of Missouri for a six year term . . . Dr. V. Q. Bonham, Fayette, appointed a member of the Board of Managers of the Fulton State Hospital . . . House of Representatives passed a bill appropriating $50,000 for manufacture and free distribution of hog cholera serum.

House of Representatives passed a bill prohibiting fee-splitting . . . twenty-five violations of pure food laws were proved recently by United States agencies against milk dealers in Illinois for shipping adulterated milk into St. Louis—in almost every instance the dealers pleaded guilty . . . many county medical societies are printing their minutes in the State Journal, thereby showing what they are doing for the betterment of medicine.

Progress Notes of Prepayment Plans

THE CHALLENGE OF 1953

While each new year has brought new problems and a new challenge to Blue Cross-Blue Shield, no one year has produced a more dramatic situation than that facing the Plans now.

Health insurance, in general, made much headway in 1952 just as it did in all of the fifteen years previously.

New millions were added to the membership rolls of Blue Cross-Blue Shield, and about in ratio, there were new policy holders listed by the companies in the commercial field.

Year's end found 87 million protected in some manner against the costs of hospital, surgical and medical care.

Some of the nonprofit plans and some of the commercials increased benefits to more nearly keep in step with the march of science and the continuing impact of inflation.

Most voluntary plans and virtually all insurance companies of any standing were forced to increase rates to the public, if not precisely in 1952, certainly within the last eighteen months.

With some 55 per cent of the year-end population covered by non-compulsory protection, the most difficult part of the task lies ahead. For, in effect, the more economically stable portion of the nation's people is the one which carries this health coverage.

Health insurance has not yet reached:

1. The indigent or the near indigent,
2. The majority of the rural population,
3. The majority of those over age 65, regardless of place of residence.

Careful reading of early releases by the President's Commission on Health Needs of the Nation, while inconclusive, leads to the belief that much emphasis will soon be placed on use of federal funds as the lever to bring both the sub-marginal group and a portion of the aged population under health insurance. It may be assumed that voluntary not-for-profit plans such as Blue Cross and Blue Shield would be utilized to some degree in such activity.

Regardless of what "big government" does, short of compulsion (which does not seem to be in the picture), Blue Cross-Blue Shield and the sincere commercial insurance companies are faced with their greatest opportunity of the past two decades.

To take full advantage of this, there must be:

1. Availability of better benefits,
2. Noncancellable coverage,
3. More honest and intensive selling efforts,
4. More flexible enrollment regulations.

These are our challenges of 1953.—*The Cross and Shield.*

SULFA*CETAMIDE*

SULFADIAZINE

SULFAMERAZINE

the "extra advantage"
in this triple sulfonamide is
sulfacetamide

TRICOMBISUL® (acet-dia-mer-sulfonamides-Schering) provides not only sulfadiazine and sulfamerazine — standard components of almost all triple sulfonamide mixtures — but also sulfa*cetamide*.

Sulfacetamide brings to the combination extremely high solubility, high bacteriostatic activity, and greater safety for the urinary tract.

TRICOMBISUL

Schering CORPORATION • BLOOMFIELD, N. J.

TRICOMBISUL

SCHERING

What Is Your Hobby, Doctor?

"Horses, Horses, Horses"

Besides carrying on an active practice against stiff competition in Kirksville, Ralph Stickler and his family have found the near perfect, year round outlet in raising and training "blue-ribbon" winners and contenders.

For the last ten years the Stickler colors have placed high in such outstanding horse shows as

the American Royal at Kansas City, Missouri State Fair at Sedalia, the Farmer's Fair at Columbia, the Fort Madison and the Waterloo, Iowa fairs, and in many others.

The compensation? . . . "is winning the blues, or crowding the other fellow, and finishing close up, with a second or a third." And, of course Dr. Stickler casually mentions selling "Miss Kirksville" for $5000; this is "hay," even in the "hay-burner" business!

There is the important added return from this hobby: A means of excitement and pleasure for all the family. His daughter, Phyllis, was featured in the *American Magazine* (May 1952), as the Co-ed of the Month. Shown in the article was her favorite, "Lady Firefly," on which she placed fourth at the American Royal.

And Jimmy, a premedic at Columbia, went through all the stages of horse training; helping develop such winners as "Model Lady," a three gaited and combination mare.

Franette, now 15, started with a top pony, "Dottie," and later trained "Dickie Boy."

Having started this hobby when all three children were small, Ralph and Mrs. Stickler soon found themselves as ardent in their love for horses as were the children. They have developed and exhibited such standouts as "Duke of Bourby," "Duchess of Stonewall," "Crimson Son," "Stonewall Belle," "Dixie Rhythm," "Frosty Night" and "Midnight Melody" in addition to the others previously mentioned.

From the beginning, it was a family affair, after office hours and on holidays. Then this horse training began to grow on all of the Sticklers. At present they have a 25 stall barn, with a 160 foot overall length. Thus they can exercise the horses in bad weather. Ralph himself "shows" in the 2 year old fine harness and stake classes.

But he insists his biggest thrill is in seeing his youngsters win the honors: Phyllis taking the Five-Gaited Stake and Trophy as outstanding rider at Bowling Green, Mo., in '49; Jimmy, the Ft. Madison, Iowa, Five-Gaited Class winner in '50; and Franette on "Stonewall Belle," winning the Ladies Class in '51, at the Kirksville North East Missouri Fair.

We congratulate the Sticklers on their hobby; "The Sport of Kings."

(Let us know of other colleagues who have unusual hobbies. V.T.W.)

Others Say

A Potential Target

Every large center of population is a potential target and a national unified organization (Civilian Defense) should be alert to such catastrophies, which likely would be simultaneously directed at many centers. Cohesion should exist and a cooperative exchange of mutual assistance should be available wherever possible.

The possibility is before us and a challenge to the leadership of the county, state and nation of both medical and lay groups has been presented. Our survival is at stake. Will we meet the challenge?—Claude J. Hunt, M.D., *Jackson County Medical Society Bulletin.*

Fast Starting Congress

The 83rd Congress is off to a fast start—so fast the government's printing presses cannot keep up with it. For example, on opening day alone, 1,117 legislative measures were offered in the House, but there was space and time to mention only 342 in that day's *Congressional Record.* A surprising number of this first batch—a full 10 per cent—were on health and welfare subjects. This may be just a quirk, or it may mean we're in for a busy year. At any rate, we're starting our analysis of bills today, although it will be another month before we are up to date. . . . In a week or so we'll have ready a Special Report, giving complete rosters of all committees that handle medical legislation. . . . As a reminder that we have an inauguration coming up, President Truman has presented his final State of Union message and budget to Congress. . . . But we hardly need the reminder: Hotels are filling for the big week, reviewing stands already are up around Capitol Hill and the White House and there's a scurry to get the best seats, even though they're not exactly being given away.—F. E. Wilson, M.D., *AMA Washington Letter.*

Meat...

and the Weight Reduction Diet in Cardiac Disease

The important relationship between obesity and the outlook in cardiac disease and hypertension is vividly emphasized in a recent publication of The American Heart Association.*

For reasons not entirely understood at present, "heart disease and high blood pressure are more common in overweight persons than in those of desirable weight." The predisposition to atherosclerosis in obesity and the increased physical burden of carrying excess weight are undoubtedly contributing factors. Hence, as this publication points out, weight reduction is the first line of defense in decreasing the incidence of cardiac disease, and in improving the prognosis after cardiac disease or hypertension has developed.

Meat occupies a prominent position in the weight reduction diets outlined in this American Heart Association booklet. This recommendation is in sharp contrast to the erroneous belief held in former years that meat is harmful in hypertension or cardiac disease. "There is no evidence that red meat or any other form of protein in moderation has any adverse influence on blood pressure."

The magic formula for reducing is simply "Eat less." Two types of diets are outlined. One "allows moderate amounts of meat and other proteins, small amounts of fat and moderate amounts of carbohydrates." The other is "high in protein with plenty of meat, eggs and cheese, moderate in fat and low in carbohydrates." Diet No. 1 provides 70 Gm. of protein, 60 Gm. of fat, and 120 Gm. of carbohydrate; caloric yield, 1,300. Diet No. 2 provides 100 Gm. of protein, 80 Gm. of fat, and 60 Gm. of carbohydrate; caloric yield, 1,360.

The inclusion of generous amounts of meat in these diets—12 to 16 ounces of cooked meat or two substantial servings each day in Diet No. 2—is a reflection of the important role meat plays in any weight reduction regimen. It is generously included because of its high content of protein of excellent biologic value and because lean meat contains unobjectionably small amounts of fat.

*Food For Your Heart, a Manual for Patient and Physician, Department of Nutrition, Harvard School of Public Health, Harvard University, The American Heart Association, Inc., New York, 1952. Copies available through local Heart Association.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute
Main Office, Chicago . . . Members Throughout the United States

Our Auxiliary

Mrs. Richard (Betty) Sutter, *President*

The State Auxiliary consists of twenty-seven Auxiliaries comprising fifty-eight counties. The Auxiliary is represented by members-at-large in thirteen additional counties which are unable to support organized auxiliaries, making a total of seventy-one counties with auxiliary affiliation. Paid membership for 1951-52 totaled 1,736, and a still larger membership is anticipated for this year.

Mrs. Richard (Betty) Sutter

The four vice presidents are charged with duties of new organization and membership, headed by the first vice president, Mrs. Norton J. Eversoll, St. Louis. The 2nd vice president is Mrs. Arch Spelman, Smithville, the 3rd Mrs. James Bruce, Jefferson City, and the 4th is Mrs. H. C. Bauman, Maryville. The State Auxiliary follows the order of councilor districts of the State Medical Association with a Director elected for two years from each district. Each Director calls a District meeting once a year to allow the smaller groups the advantages of meeting together. Current Directors include: serving one year, Mrs. Joseph Fisher, St. Joseph; Mrs. A. H. Hite, Green Ridge; Mrs. J. J. Merz, St. Louis; Mrs. J. L. Washburn, Versailles; Mrs. Howard Wilcox, Boonville. Serving two years are: Mrs. T. L. Dwyer, Mexico; Mrs. Guy B. Everist, Rolla; Mrs. A. W. Hanss, Springfield; and Mrs. J. Logan Mayfield, Washington.

The Auxiliary has followed the pattern of the Missouri State Medical Association and hyphenated counties as soon as the Association has done so. However, there are several counties in which there is a medical organization but no Auxiliary organization, and in which we are anxious to obtain the names of interested women. These counties include Barton-Dade, Butler, Chariton-Macon-Monroe-Randolph (members at large only), Dallas-Hickory-Polk, Henry, Johnson, Lewis-Clark-Scotland, Newton, North Central Counties, Pike, Platte, Semo Counties, Vernon-Cedar, Webster and Holt. Dues for members-at-large are only $2.00 per year, $1.00 of which includes membership in the Auxiliary of the A.M.A., the other $1.00 going to the State Auxiliary.

Where a Medical Society has an active Auxiliary, attendance is better at the Medical Society and community feeling toward the profession tends to be better. Doctor, does your wife belong to the Auxiliary?

Capsule Clinics

Irving A. Wien, M.D.

- Statistics for the operative treatment of melanoma stand at 18 per cent for 5 year survivals. Rutter, T.: Jackson Clin. Bull. 14 (November) 1952.

- Unilateral enlargement of the hilar shadow of the lung is the most commonly overlooked early sign of bronchogenic carcinoma. Rigler, L. G., et al: Radiology 59 (November) 1952.

- The incidence of jaundice after transfusions with "pooled plasma" is so high (5 to 15 per cent) that many clinicians have abandoned its use except for the emergency treatment of shock. Palmer, W. L.: Gastroenterol. 22 (November) 1952.

- Procaine amide (Pronestyl) has been found to be effective in controlling the choreiform activity in heredity (Huntington's) chorea. Goldman, D.: Am. J. M. Sc. 224 (November) 1952.

- The emergency roentgen examination of the gastrointestinal tract (for massive hemorrhage) may be performed with reliability and greater safety than was formerly believed possible. Zamcheck, N., et al: Am. J. Med. 13 (December) 1952.

- Tests for the sensitivity of microorganisms to antibiotics should be used only when the original premise for the selection of the antibiotic for therapeutic purposes was incorrect, and not as routine measures. Long, P. H.: Bull. New York Acad. Med. 28 (December) 1952.

- Cancer limited to the prostate gland should receive radical perineal prostatectomy and endocrine therapy. Brendler, H.: Journal of Urology 68, October 1952.

- If the common duct was explored only in patients with a history of jaundice, 40 per cent of common duct stones would be missed. Lahey, F. H.: Postgraduate Medicine 12, September 1952.

- Determination of the exercise tolerance of the patient with heart disease is the key to the evaluation of this patient as a surgical risk. Advance in Medicine and Surgery, Graduate School of Medicine, University of Pennsylvania, W. B. Saunders Co., Philadelphia, 1952.

Upjohn

long-acting androgen:

Depo-Testosterone

Trademark Reg. U. S. Pat. Off.

CYCLOPENTYLPROPIONATE

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Each cc. contains:

Testosterone Cyclopentylpropionate .....50 mg. or 100 mg.

Chlorobutanol ..... 5 mg.

Cottonseed Oil .....q.s.

50 mg. per cc. available in 10 cc. vials

100 mg. per cc. available in 1 cc. and 10 cc. vials

The Upjohn Company, Kalamazoo, Michigan

President's Comments

A copy of an announcement sent out by the Missouri Naturopathic Association follows:

"The Missouri Naturopathic Association is planning to present a bill at this session of the Legislature in order that we may add Missouri to the column of the many States having regulated this profession such as Arizona, California, Utah, District of Columbia, Washington, Texas, Georgia, Illinois, South Carolina, Connecticut, Oklahoma, Hawaii, Virginia, Florida, Oregon, Pennsylvania, and to the north of us Alberta, British Columbia, Manitoba, Ontario.

"There are about eight hundred and thirty one Naturopathic Physicians practicing this profession in Missouri caring for an average of ten thousand of the sick per day.

"Like the Dentists, Osteopaths, Chiropodists, Chiropractors, Optometrists and the Medical Doctors (Alapaths). We are in urgent need of regulation in order that we may be able to control the quality of our practitioners to insure better health.

"True, no one likes competition, but competition is the greatest measure of insurance for the progress of medical science.

"Naturopathy was founded in 1493 by the famed Swiss physician Paracelus, and others."

This group has had legislation introduced in several sessions of the legislature. All of these bills were defeated. Evidently another effort is to be made in the present session.

"Naturopathy" has been defined in these bills as a system of diagnosis and treatment for the prevention, alleviation and correction of human ailments, diseases and physical conditions by the use of natural methods consisting of physiotherapy, manual or mechanical manipulation, the proper use of diet, minerals, vitamins and other substances found in or required by the human body to assist nature in resisting and overcoming human ailments, diseases and physical conditions.

J. William Thompson M.D.

Division of Health

James R. Amos, M.D., *Director*

Industrial Hygiene Program

Missouri has experienced a comparatively rapid and intensive industrial growth during the last ten years. The greatest increases have taken place in the population centers of St. Louis and Kansas City, but there has also been a recognizable trend toward the location of industry in the smaller communities. Statistics based on the advance reports of the 1950 census show an increase of 200,000 in the employed population of Missouri between 1940 and 1950. For comparison, the same reports show that 37.7 per cent of the total population in Missouri was employed as against 34.2 per cent in 1940.

Industrial hygiene has been defined as the practice of public health applied to the gainfully employed. An industrial hygiene program, therefore, is not only concerned with the prevention of disease of an occupational origin, but also the prevention of communicable disease through the application of sound public health practices. The benefits of a healthy worker extend beyond the individual to include his family and the community. Industry also shares in the benefits of a healthy worker.

To more adequately serve industries in St. Louis and Kansas City, industrial hygiene services have been organized in the local health departments in St. Louis, Kansas City and St. Louis County. The Kansas City service is a joint function of the Kansas City Health Department, the Jackson County Health Department and the Missouri Division of Health and functions in Jackson and Clay counties as well as Kansas City. The industrial hygiene program of the Missouri Division of Health includes the provision of assistance to those local units as well as furnishing services to industries in the balance of the State.

The services considered as being necessary to constitute a balanced industrial hygiene program have been described as follows:

1. Studies of the working environment including suggestions and recommendations for the correction of conditions found to be detrimental to health.
2. Advice to industry regarding the toxicity of materials and processes.
3. Consultant service to plant physicians, nurses and other interested personnel.
4. Laboratory service of both a chemical and physical nature.
5. Health education assistance for management, labor groups and professional groups.
6. Assistance to industries in starting in-plant health services.
7. Promotion of adult health programs.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 March, 1953 Number 3

TRANSLUMBAR AORTOGRAPHY IN INFANTS UTILIZING 70 PER CENT UROKON AS A CONTRAST MEDIUM

W. F. MELICK, M.D.
ST. LOUIS
T. D. BOLER, M.D.
ST. LOUIS
AND
H. BLACK, M.D.
ST. LOUIS

THE USE OF translumbar aortography in infants has not been studied adequately. Through personal discussion with most of the workers in the field of aortography, it was found that no large series of cases of its use in infants is reported. Goodwin, Scardino and Scott discuss aortography in four children, one of whom was 18 months old. Due to the known necrotizing effect of sodium iodide, which was formerly the only available adequate medium, aortography has not been done in infants. Campbell, in his textbook of pediatric urology, states that aortography "in the young is today extremely difficult, dangerous and unsatisfactory," although he cites no actual references to its having been done. We shall have to disagree with this statement.

In adults we have reported on the satisfactory use of 70 per cent Urokon Sodium as a substitute for the 80 per cent sodium iodide. There is no disagreement as to the possible dangers of injecting sodium iodide, which is extremely necrotizing. The only reaction in adults which has been seen following the translumbar aortic injection of 70 per cent Urokon has been an occasional mild nausea and vomiting. This has also been the only reaction noted by Wall and Rose who, recently, reported the rapid intravenous injection of 50 cc. of 70 per cent Urokon in a series of eighty adult patients. Urokon causes a low degree of tissue reaction even if inadvertently injected around the aorta. This has been studied in experimental animals by Byrne and Melick. It has also been confirmed clinically in four patients in which the Urokon, through faulty technic, was injected around, instead of into, the lumen of the aorta. None of the four patients had any difficulty other than mild transient back pain. The injection of Urokon into the aorta causes no pain, and this fact has been utilized in changing the technic whereby translumbar aortography can be done under local instead of general anesthesia in adults.

Fig. 1. Pyelogram made several days following surgery by injecting dye through inlying ureteral tubes.

As far as the puncture site in the aorta is concerned, no investigator has noted any evidence of bleeding from the puncture site in more than 4,000 published cases of aortography. As a matter of fact, aortic puncture should be far safer in infants and children than it is in adults. The aortic wall in children is more elastic, with much

From the Department of Urology, St. Louis University, and the St. Louis University Urological Unit, St. Louis City Hospital.

less possibility of being arteriosclerotic, or containing atheromatous plaques, than in adults. We have also had several neurosurgeons try out 30 to 35 per cent solutions of Urokon Sodium as the media for cerebral arteriography. The marked lack of severe reactions such as convulsions seen when other media are used for this purpose has been additional clinical proof of the value of Urokon. Since Urokon Sodium is an organic iodine, the possibility of allergic reactions must be kept in mind, even though we have not had any marked reactions up to the present.

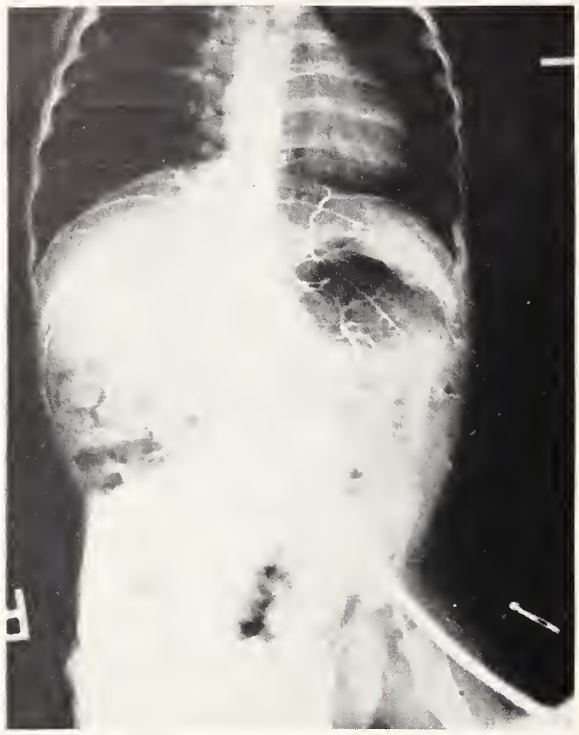


Fig. 2. First in series of serial aortograms showing dye (70 per cent Urokon) beginning to fill aortic tree.

Fig. 3. Second in series, aorta, iliacs, coelic axis and renal arteries well visualized. Right renal artery is normal in size.

CASE REPORT

M. R., a 5½ week old male, was admitted to the pediatric service of St. Louis City Hospital on October 28, 1950. The child's weight at birth was 7 pounds. Chief complaint was of vomiting and crying as if in pain. Physical examination disclosed an undernourished and dehydrated infant weighing 6 pounds, 12 ounces. A tentative diagnosis of pyloric obstruction was made.

Fig. 4. Third exposure. Renogram beginning to appear. Some dye still in iliac arteries.

Laboratory work showed a white count of 21,360, red count 4.5 million, 13 grams of hemoglobin, the blood urea nitrogen was 60, the chlorides 104 m.e. per liter, the CO_2 combining power was 11.7 vols. per cent, the urine was loaded with pus cells and gram negative, motile, rods which on first cultures were E. Coli. Subsequent cultures showed pseudomonas and streptococci in addition to the E. Coli. The child continued to show acidosis, elevated blood urea nitrogen and infected urine in spite of chemotherapy and intravenous sodium-r-lactate. A cystogram showed no reflux and after unsuccessful attempts to secure intravenous pyelograms, urologic consultation was requested.

Cystoscopy showed a bladder neck contracture with

marked bilateral hydronephrosis and hydroureters. On November 29 a suprapubic cystotomy was carried out. At that time the ureteral openings were slit with scissors and resutured to the bladder mucosa. Indwelling F10 urethral catheters were placed in each ureter and brought out with the suprapubic tube. The immediate postoperative period was marked by convulsions and the blood calcium rose to 7.9. The blood urea nitrogen rose to 90 and fell to 45. On oral molar lactate the child was maintained out of acidosis. All antibiotics and sulfa drugs were tried with little effect on the infection. The urine output remained satisfactory. A pyelogram made through the inlying catheters on December 28 showed some improvement in the hydronephrosis and the catheters were removed but the suprapubic tube was left in place. The pyelogram made at that time is shown in figure 1.

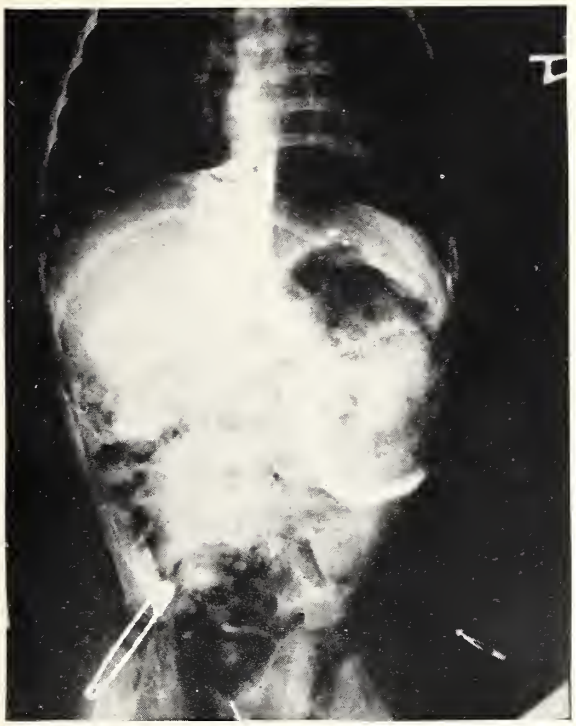


Fig. 5. Fourth exposure. Good renograms.

At the age of 1 year, the child began to improve and became afebrile, although he still would vomit frequently. In May, 1951, the child again developed a fever, spiking in nature, up to 102 F. In August, 1951, an intravenous urogram was unsuccessful and retrograde pyelograms through the cystotomy wound were attempted. On the left, a catheter could be readily passed and the pyelogram showed improvement. The right orifice appeared to be normal, but no catheter could be passed beyond 2 to 3 cms. up the ureter. Repeated attempts were made without success. Because it was impossible to determine the status of the right kidney in any other way, translumbar serial aortography was carried out on October 10. The blood chemistry at that time was: nonprotein nitrogen 53, chlorides 122, and CO_2 combining power 22.5 m.e. per liter. The child's weight was then 6,900 grams and the urine cultures showed A. aerogenes and Pseudomonas. The child has had no difficulty following the procedure.

Technic of Injection.—The child was anesthetized lightly with drop ether, placed face down on the x-ray table and the skin of the back prepared with

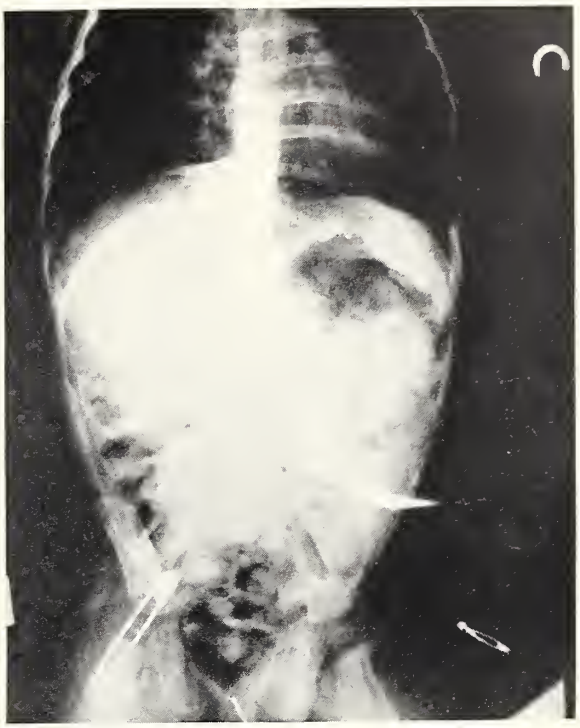


Fig. 6. Fifth exposure in series.

Fig. 7. Last exposure. Renogram outlined.

merthiolate. An ordinary 18 gauge spinal needle was inserted into the aorta in the usual manner except that the point of puncture was only two fingerbreadths to the left of the midline instead of four as in adults. The aorta was readily entered and bright red blood pulsed out in drops, just as in the case of adults. A Robb-Steinberg angiocardiographic syringe was used to inject 6 cc. of 70 per cent Urokon Sodium into the aorta. The Sanchez Perez multiple cassette changer was used to secure pictures as the dye was flowing into the aorta. The pictures which are reproduced in figures 2 to 7 were all made within four and one-half seconds. No dye is seen in the aorta after the third picture. An intravenous pyelogram,

Fig. 8. Secretory urogram made three minutes after the aortic injection of the 70 per cent Urokon. Outlines of pelves marked out because of excessive intestinal gas.

figure 8, was then made by taking another x-ray three minutes after the aortograms.

DISCUSSION

Translumbar aortography in the young as a routine procedure is not advocated any more than it is in the adult. This attitude has been inherited from the American pioneers in this field, Doss and Nelson, and in our five years of work with aortography their warnings have been heeded with the result that as of today, we have had no fatalities. There has been no attempt on our part to build up any tremendous number of cases of aortography. It has been used as originally intended, to obtain information that could be gotten in no other way. The present case reported illustrates admirably this point. As we have written before, the best argument in favor of translumbar aortography is its ever increasing use by more and more investigators. In the child, in whom extreme renal conservation is admittedly of paramount importance, its use in estimating the renal potentiality through visualizing the renal blood flow should be of great importance. Now that a definitely safer medium has been developed the dangers of the procedure have certainly been reduced to a minimum. The great advantage of serial pictures is that one is certain to more adequately demonstrate the renal blood flow.

SUMMARY

1. The use of Urokon Sodium, 70 per cent has resulted in excellent visualization of the aorta and its branches.

2. The procedure is far safer when a less necrotizing medium than 80 per cent sodium iodide is used.

3. The use of translumbar aortography in an infant is reported. We believe it is the first case in which it has been done in an infant this young.

1325 S. Grand Ave.

BIBLIOGRAPHY

1. Goodwin, W. E.; Scardino, P. L., and Scott, W. W.: Translumbar Aortic Puncture and Retrograde Catheterization of the Aorta in Aortography and Renal Arteriography, Ann. Surg. **132**:944, 1950.
2. Campbell, M.: Clinical Pediatric Urology, Philadelphia, W. B. Saunders, 1951.
3. Byrne, J. E., and Melick, W. F.: Subcutaneous Urography: Description of a New Method Utilizing 70% Urokon and Hyaluronidase, Urol. & Cutan. Rev. **55**:193, 1951.
4. Melick, W. F.; Yarbrough, C. P., and Boler, T. D.: Translumbar Serial Aortography, J. Urol. **66**:458, 1951.
5. Melick, W. F.; Boler, T. D., and Byrne, J. E.: The Experimental and Clinical Investigation of Various Media Used in Translumbar Aortography, J. Urol. In press.
6. Wall, B., and Rose, D. K.: The Clinical Intravenous Nephrogram, J. Urol. **66**:304, 1951.

Fainting Spells

Sudden loss of consciousness has always been of interest to the physician. Syncope may be a symptom of little significance or it may be of extreme importance. Since Weiss's classic review in Oxford medicine in 1939, there have been some additions worth noting.

There is a definite redistribution of blood and a widespread stimulation of both sympathetic and parasympathetic nervous systems in the common faint. Hyperventilation is a common trigger mechanism to set off the faint reaction. The physiologic reasons for increased incidence of fainting in diabetes with neuropathy, tetralogy of Fallot, pulmonary hypertension due to pulmonary artery disease and heart disease such as paroxysmal, tachycardia and mitral stenosis are more thoroughly understood.

The importance of carbon dioxide retention as a cause of confusion with loss of consciousness has become much better appreciated and now may be better understood.—Eugene A. Stead, Jr. *American Journal of Medicine,* October 1952.

HYALINE MEMBRANE FORMATION IN THE NEWBORN: HEMATOGENIC SHOCK AS A POSSIBLE ETIOLOGIC FACTOR

DANIEL B. LANDAU, M.D.
HANNIBAL, MISSOURI

Anoxia continues to be a serious problem in many newborn infants. It is a leading cause of death in all reported studies of newborn infant mortality.

Since Miller and Hamilton[1] reported their findings on the pathogenesis of the vernix membrane and its relation to aspiration pneumonia in stillborn and newborn infants, there has been an increased interest in this phase of the problem.

They found evidence of aspiration in the lungs of full term stillborn infants in the form of large numbers of blue staining cornified epithelial cells with large amounts of fats in the terminal air spaces. Hyaline-like membranes were found in the terminal air spaces in greatest numbers in the lungs of live born premature infants in whom there was no history of maternal complications of pregnancy or labor. They suggest that the hyaline-like membranes represent a reaction to an injury of the epithelium of the air spaces, especially of the bronchioles and alveolar ducts; they point out the similarity of these membranes to those found in older individuals dying of pandemic influenza and with rheumatic pneumonitis. These findings suggest to them that an intra-uterine inflammatory reaction may be a factor and they also suggest that the hyaline-like membrane is phagocytized by polymorphonuclear neutrophilic cells and mononuclear cells.

Among earlier studies, Farber and Sweet[2] concluded that asphyxial death in the newborn resulted from impaired transfer of oxygen across the pulmonary membrane as a result of inhaled amniotic sac contents which formed a hyaline membrane or a vernix membrane which lined the alveoli.

Miller and Jennison[3] reported from autopsy material that at least 15 per cent of all live born premature infants weighing between 1,000 grams and 2,000 grams at birth had hyaline-like material in their lungs. The incidence of this pulmonary lesion diminished progressively as the birth weight of the infants increased so that it was practically nonexistent in infants weighing more than 3,000 grams at birth.

Ninety per cent of all infants weighing more than 1,000 grams at birth and dying in the first forty-eight hours of life had hyaline-like material in their lungs at autopsy, providing the mother's pregnancies and labors had been free of serious complications and providing that the infants themselves had no other clinically recognized disease or defect of a serious nature.

They stated that "the symptomatology of the infants dying with hyaline-like material in their lungs was characterized by marked respiratory difficulty, including retraction of the lower chest wall with inspiration." They state that these symptoms are not pathognomonic but that few premature infants with similar symptoms survived. They advance the theory based on their own studies that the hyaline-like material in the lung results from an etiologic agent that not only injures the lungs but also causes the premature birth of the fetus so injured.

Behrle, Gibson and Miller[4] state that the application of increased concentration of oxygen and increased pressures could not be expected to offer a solution to the problem after the hyaline membrane had formed. The lungs of newborn infants, both stillborn and liveborn, obtained from autopsy material were studied regarding their expansion potentialities. They found that those lungs which contained extensive hyaline membrane could not be satisfactorily expanded. They also found that the lungs of infants weighing less than 1,200 grams could not be expanded to the same degree as those weighing more than 1,200 grams. They report that the presence of edema fluid, exudate, hemorrhage or amniotic sac contents in the air spaces in the absence of extensive hyaline membrane formation did not interfere with good lung expansion.

Blystad, Landing and Smith[5] reviewed the autopsy protocols of all infants examined in the Pathology Laboratory of the Boston Lying-In Hospital during the years 1941 to 1948 inclusive.

They state that this condition, never encountered in stillborn infants, and thus not arising prenatally, is seen most frequently in the lungs of infants who have died within forty-eight hours after delivery. Eighty-eight per cent of the patients having these membranes died during this interval.

They found that pulmonary hyaline membranes were present in about half of all premature infants studied. They are of the opinion that the formation of these membranes and the associated atelectasis seem to represent one of the most serious problems of prematurity and that probably this condition is one of the main factors which keep the mortality rate of premature infants at its high level.

Among the complications in which there is a reported high incidence[5] of hyaline membrane formation are toxemia, multiple pregnancies, erythroblastosis fetalis, premature separation of the placenta, premature labor only, placenta previa, fetal distress, cord around the neck or shoulder, breech delivery and cesarean section.

There is an especially high incidence of the hyaline membrane in cesarean infant deaths. Blystad, Landing and Smith[5] report that ten of the thirty-one full term infants in their series with hyaline membranes were section babies. They state that this is strongly suggestive that the section itself is a significant factor in the production of these hyaline membranes.

Potter[6] stated that hyaline membranes accounted for all of the deaths of babies after cesarean sec-

tion in her institution between 1939 and 1949 who were not malformed or who did not have erythroblastosis and that it accounted for 40 per cent of premature deaths.

The common factor often present in premature infants and section infants is prompt clamping and cutting of the umbilical cord so that the infant can be taken to warmth and oxygen as soon as possible. Immediate clamping and cutting of the umbilical cord also often is carried out, of necessity in toxemia, multiple pregnancies, erythroblastosis fetalis, premature separation of the placenta, placenta previa, fetal distress, cord around the neck or shoulder and breech delivery.

Considering the high incidence of hyaline membrane formation in those fetal complications of labor which result in the early separation of the infant from its placental blood supply, one must consider whether or not the primary etiologic factor in this syndrome can be hematogenic shock as a result of decreased blood volume, with its accompanying loss of oxygen carrying ability, with hyaline membrane the resultant or secondary finding in many of these infants.

De Marsh, Windle and Alt[7] found that immediate clamping of the umbilical cord of the newborn infant deprives the infant of 107 cc. (average) of blood. They found that the blood volume of these infants allowed to receive the placental and umbilical vessel blood was 361 cc. or 11.8 per cent of the body weight, in contrast with 301 cc. or 9.6 per cent of the body weight in the infant whose cord was cut immediately. They estimate that more than 26 per cent but less than 34 per cent of the average total fetal blood is in the placenta and umbilical vessels at the end of fetal life. Under normal conditions of birth most of this blood passes to the newborn infant while the uterus is contracting on the placenta in the third stage of labor. They found that the difference in the blood volume according to the time the cord is clamped becomes a difference principally in red cell mass, the plasma volume being equalized by rapid adjustment of extracellular fluid. Their studies were restricted to infants delivered under normal conditions. It is possible that the blood volume of infants delivered under pathologic conditions would have a less rapid restoration of blood volume. They found considerable differences in their hematocrit determinations, reporting 53 per cent on the first day and 51 per cent on the third day in those infants deprived of their placental blood, contrasted with values of 61 per cent on the first day and 60 per cent on the third day in those infants who received the placental blood. These differences are statistically significant and could conceivably have considerable influence on the oxygen carrying ability of the blood.

Ballentine's[8] studies of delayed clamping of the umbilical cord in newborn infants showed an average increase of 96 cc. of blood by delaying clamping until cessation of cord pulsations.

During a cesarean section in which I was assisting, the cord was accidentally severed on opening the uterine cavity. The cord was clamped immediately and 95 cc. of blood were recovered. On another occasion when erythroblastosis was anticipated the cord was clamped and the placenta was suspended and 115 cc. of blood were recovered in this instance.

McCausland, Holmes and Schumann[9] found that newborn infants receiving the placental blood had higher initial weights, less rapid weight loss and less weight loss in addition to higher erythrocyte counts and hemoglobin values. They feel that the additional blood supplied is of benefit especially to premature infants and to those infants who are in any degree of shock following long labors, difficult deliveries, abruptio placenta, placenta previa or compression of the cord.

Their survey of 1,900 diplomates of The American Board of Obstetrics and Gynecology of whom 1,198 answered showed considerable variation in the management of the cord and placental blood. Forty-one and five tenths per cent clamped the cord immediately after birth and 33.4 per cent clamped the cord less than five minutes after birth. They found no uniformity in the management of cord and placental blood in the teaching in medical schools or among those physicians specializing in obstetrics.

The high incidence of hyaline membrane formation in premature infants is noteworthy. Since the placenta is larger in relation to the body size in the premature than in the full term infant, the quantity of the placental and cord blood is greater in relation to the premature infant's blood volume than to the full term infant's blood volume. There has always been great haste to get the premature infant into the incubator in order to get him to warmth and oxygen as soon as possible after delivery. This haste deprives the premature infant so handled of a considerable amount of placental blood.

This same haste is also characteristic of the procedures carried out in the delivery of those infants in fetal distress or potential distress from a variety of causes.

The delay in onset of symptoms in some[10] of these infants may correspond to the latent period prior to the onset of symptoms of delayed or secondary shock from blood loss from trauma in older individuals with its drop in blood pressure below the critical level. This delay is followed by the onset of symptoms which include rapid whining respirations, groaning, costal retraction and air hunger with cyanosis, often leading to death. This syndrome is identical with that of the cesarean section syndrome which has been treated prophylactically with reported success by placental suspension and drainage[11] to enable the infant to obtain the placental blood.

SUGGESTED PATHOGENESIS

Amniotic fluid is aspirated during or immediately following delivery. The fluid progresses

downward to the smaller bronchioles either to ultimate flattening over the pulmonary epithelium or to blocking above that level with resulting atelectasis below. Absorption of the fluid by alveolar capillaries leaves the residual amniotic fluid protein which forms this membrane over the pulmonary epithelium. This seals off the alveoli leading to progressive anoxia and finally to death.

Vigorous infants should be able to expel this material while it is still in the fluid state by their own efforts by coughing or with the aid of postural drainage and catheter suction.

Premature infants or others who have been through a complicated or difficult delivery would be less able to expel this material. Those in a shock-like state with its oxygen deficiency, use all of their efforts for inspiration and lack the strength to cough in order to expel this material. As the condition progresses the material becomes more firm and it seals the alveoli with which it has contact.

PROPHYLAXIS

Assuming that this theory is correct, the following procedures are suggested as prophylactic measures:

1. Attempts to obtain the normal amount of placental blood for the infant by:

(a) Waiting for cessation of umbilical cord vessel pulsations and for collapse of the cord before clamping and cutting the cord. (Postural drainage and catheter suction can be carried out during the waiting period.) (Oxygen can be administered if necessary.)

(b) Placental suspension and drainage for cesarean delivered infants.

2. Gastric suction immediately[12] following birth and at hourly intervals therefater when indicated, especially for cesarean delivered infants.

3. Blood typing and cross matching for those infants considered to be likely candidates for the shock syndrome and hyaline membrane formation such as: premature infants, cesarean section infants, those born of mothers with placenta previa, and all others whose umbilical cords are severed early in order to expedite blood transfusion* at the first signs of onset of the shock syndrome. A scalp vein or any other available peripheral vein may be used. Transfusion through the umbilical vein[13] by use of an umbilical vein catheter is also suggested.

4. Plasma administration if blood is not available.

TREATMENT

Thus far treatment of the fully developed syndrome has not been effective.* The use of a respiratory atmosphere supersaturated with moisture as recently advocated by Gellis and quoted by Smith[11] is suggested.

CONCLUSIONS

1. Hematogenic shock is suggested as a possible contributing factor in hyaline membrane formation in some instances.

2. Suggestions regarding its prophylaxis are made.

BIBLIOGRAPHY

1. Miller, Herbert C., and Hamilton, Tom R.: The Pathogenesis of the "Vernix Membrane"; Relation to Aspiration Pneumonia in Stillborn and Newborn Infants, Pediatrics **3**:735, 1949.
2. Farber, S., and Sweet, L. K.: Amniotic Sac Contents in Lungs of Infants, Am. J. Dis. Child. **42**:1372, 1931.
3. Miller, H. C., and Jennison, M. H.: Pulmonary Hyaline-like Material in 4,117 Consecutive Births, Pediatrics **5**:7, 1950.
4. Behrle, F. C.; Gibson, D. M., and Miller, H. C.: Expansion of Lungs of Newborn Infants, Pediatrics **7**:782, 1951.
5. Blystad, W.; Landing, B. H., and Smith, C. A.: Pulmonary Hyaline Membranes in Newborn Infants, Pediatrics **8**:5, 1951.
6. Potter, Edith: Prenatal Development of the Human Lung, Am. J. Dis. Child. **82**:226, 1951.
7. DeMarsh, Q. B.; Windle, W. F., and Alt, H. L.: Blood Volume of Newborn Infant in Relation to Early and Late Clamping of Umbilical Cord, Am. J. Dis. Child. **63**:1123, 1942.
8. Ballentine, G. N.: Delayed Ligation of the Umbilical Cord; Pennsylvania M. J. **50**:726, 1947.
9. McCausland, A. M.; Holmes, Francis, and Schuman, William R.: Management of Cord and Placental Blood and Its Effect Upon the Newborn, California Med. **71**: (September) 1949.
10. Landau, Daniel B.; Goodrich, Howard B.; Francka, W. F., and Burns, Francis R.: Death of Cesarean Infants: A Theory as to Its Cause and a method of Prevention, J. Pediat. **36**:421, 1950.
11. Smith, Clement A.: The Valley of the Shadow of Birth, Am. J. Dis. Child. **82**:171, 1951.
12. Gellis, S. S.; White, P., and Pfeffer, W.: Gastric Suction; A Proposed Additional Technic for the Prevention of Asphyxia in Infants Delivered by Cesarean Section, New England J. Med. **240**:533, 1949.
13. Diamond, Louis K.; Allen, Fred H., and Thomas, Jr., William, O.: Erythroblastosis Fetalis. VII. Treatment With Exchange Transfusion, New England J. Med. **244**:39-49 (Jan. 11) 1951.

* A premature infant, one of twins delivered by cesarean section because of abruptio placenta, developed the classical symptoms within four hours following birth. He was treated by immediate blood transfusion. His symptoms cleared promptly and the subsequent course was uneventful. (Manuscript giving complete details in process of preparation.)

BOOK REVIEW

HISTORY AND DEVELOPMENT OF NEUROLOGICAL SURGERY, by Ernest Sachs, M.D., Research Associate in Physiology, Yale University, New Haven; Formerly Professor of Clinical Neurological Surgery, Washington University School of Medicine, St. Louis. Paul B. Hoeber, Inc. 1952. Price $5.00.

As the first professor of neurological surgery in America, Dr. Sachs is eminently suited to the task of reviewing the various phases in the evolution of his specialty. Although the subject matter is condensed into less than 100 pages, his book has a typical direct but easy style and is extremely readable.

There are six chapters through which the author traces the developments of intracranial and intraspinal surgery from the prehistoric trephining procedures of the Incas and primitive New Zealanders, through the technics of ancient and medieval cranial surgeons to the practices of contemporary neurosurgeons. Special mention is made of the pioneers in the field, Horsley, Frazer, Elsberg, Adson and their predecessors Inhotep, Hippocrates and Galen. The reader may be surprised to learn that the first recorded operation was a craniotomy and that many of these cases survived.

The book excells in many ways. Perhaps its chief value lies in a critical appraisal of diagnostic and operative technics developed within the author's lifetime. The subject matter is profusely illustrated and there is a good bibliography. R. C. L.

THE USE OF SUPPOSITORIES IN TREATMENT OF HEREDITARY CEPHALALGIA

CECIL M. CHARLES, M.D.
ST. LOUIS

In 1950 I made a report on the results obtained from treatment of hereditary cephalalgia with subcutaneous, intravenous and oral administrations of ergotamine tartrate (Gynergen), dihydroergotamine methanesulfonate (D.H.E. 45), together with ergotamine tartrate and caffeine (Cafergot). Since that time, ergotamine tartrate in various combinations has been employed as a rectal suppository for the relief of hereditary cephalalgia. The term, hereditary cephalalgia, as defined before, is applied to headaches in individuals giving a family history of paroxysmal, severe headaches, and having such headaches themselves. No attempt has been made to differentiate the headaches into different groups such as migraine, atypical migraine, tension headaches, histaminic cephalalgia, atypical histaminic cephalalgia and unclassified headaches.

The four drugs that have been employed (and the dosage of each) are:

1. Ergotamine Tartrate, 2 mgs. This drug has a vasoconstrictor action by virtue of its being a sympathetic inhibitor, and it is thought that this action on the branches of the external carotid artery is the mechanism whereby it relieves headaches.
2. Caffeine, 100 mgs. Both a vasoconstrictor and a central stimulant action are provided.
3. Bellafoline Substance, 0.25 mgs. Inhibition of the parasympathetic system produces almost complete cholingeric blockade. It relieves smooth muscle spasm and controls the tendency to hypersecretion of gastric, salivary and bronchial glands.
4. Pentobarbital Sodium, 60 mgs. This is a central and subcortical sedative.

Suppositories of these drugs and of all combination that include ergotamine tartrate are:

1.* Ergotamine Tartrate, 2 mgs.
2. Caffeine, 100 mgs.
3.* Bellafoline Substance, 0.25 mgs.
4.* Pentobarbital Sodium, 60 mgs.
5.* Ergotamine Tartrate, 2 mgs.
Caffeine, 100 mgs. E.C. 112.
6. Ergotamine Tartrate, 2 mgs.
Bellafoline Substance, 0.25 mgs.
7.* Ergotamine Tartrate, 2 mgs.
Pentobarbital Sodium, 60 mgs.
8.* Ergotamine Tartrate, 2 mgs.
Caffeine, 100 mgs.
Bellafoline Substance, 0.25 mgs. E.C.B. 115.
9.* Ergotamine Tartrate, 2 mgs.
Caffeine, 100 mgs.
Pentobarbital Sodium, 60 mgs.
10.* Ergotamine Tartrate, 2 mgs.
Bellafoline Substance, 0.25 mgs.
Pentobarbital Sodium, 60 mgs.
11.* Ergotamine Tartrate, 2 mgs.
Caffeine, 100 mgs.
Bellafoline Substance, 0.25 mgs.
Pentobarbital Sodium, 60 mgs. E.C.B.P. 163.

Trials of the various suppositories indicated that in a few cases ergotamine tartrate by itself was effective; pentobarbital sodium, if used early was of questionable value; bellafoline substance was of no value, and caffeine was not tested. However, ergotamine tartrate with caffeine was found to be effective in a number of patients, but more effective was ergotamine tartrate with pentobarbital sodium. The combination of ergotamine tartrate, caffeine and bellafoline substance produced about the same degree of effectiveness as was produced without the bellafoline, but there was less evidence of side reaction. The combination of four drugs was found to give the most effective results of all the suppositories tested and with probably the least side reaction.

An early study of the use of E.C. 112 for headaches was made by Kadish in 1950. He reported thirty-six cases of migraine for which the results were excellent in twenty, good in twelve and poor in four; and on ten cases of tension headaches with excellent results in five, good in two and poor in three. He also noted that the effectiveness of D.H.E. 45 rectal suppositories was somewhat less than of E.C. 112 suppositories.

Blumenthal and Fuchs made the following report after observing that the effectiveness of E.C. 112 was better by rectal administration than by oral administration.

"A. Parenteral Administration: 1. The person designated to administer the medication (physician, friend or family) may not be immediately available. 2. If medication is to be self administered, patients are frequently too tense and jittery to make the injections themselves. Others find themselves losing a variable and unknown part of the medication through syringe leakage, slipping or inability to see well enough to fill the syringe properly.

"B. Oral Administration: 1. Patients may be too nauseated to retain medication. 2. The medication may induce vomiting."

Ryan, in 1951, reported on E.C. 112, E.C. 222 (2 mgs. ergotamine tartrate and 200 mgs. caffeine) and E.C.B. 115. He concluded from results obtained from the three preparations that the relief from headache attacks was not better than with oral preparations and, in most cases, not as good. However, in his later report of 1952, he found that the E.C.B.P. 163 suppositories gave better results than did Cafergot.

Reisman (1952) compared E.C. 222, E.C. 112 and E.C.B. 115 and found that E.C. 222 was the most effective but that it produced more side reactions.

Table 1 gives the results obtained with the use

Departments of Anatomy and Medicine, Washington University and the Barnes Hospital, St. Louis.
* Used in clinical trials.

of E.C. 112 and E.C.B.P. 163.* In addition, several tests were made with various other combinations, only one of which was found to be of definite value. This was No. 7, a combination of ergotamine tartrate 2 mgs. and pentobarbital sodium 60 mgs. In general, the results were more effective than those of E.C. 112, but not as effective as those of E.C.B.P. 163. However, there were fewer side effects with No. 7 than with E.C.B.P. 163.

TABLE 1. RESULTS IN TREATMENT OF HEREDITY CEPHALALGIA WITH SUPPOSITIORIES

Drug	*Number of Cases*	*Degree of Relief*			*Side Effect*
		EXCELLENT	GOOD	POOR	
E.C. 112	25	5 (20%)	9 (36%)	11 (44%)	5 (20%)
E.C.B.P. 163	50	36 (72%)	13 (26%)	1 (2%)	11 (22%)

Table 2 presents the results obtained with subcutaneous injections, oral medications and rectal suppositories. It will be noted that ergotamine tartrate, subcutaneously, is the most effective of all medications. Of those given rectally, E.C.B.P. 163, is the most effective. Cafergot and E.C. 112 produce approximately the same degree of beneficial results. However, since oral medication cannot be given if nausea and vomiting have developed, the rectal suppository, or the subcutaneous injection, should be utilized. Of these, the suppository is preferable to the subcutaneous route.

TABLE 2. COMPARATIVE RESULTS BY SUBCUTANEOUS, ORAL AND RECTAL ROUTES

Number of Patients		25	25	22	34	17	25	50
Drug		*Gynergen (Injection)*	*DHE 45 (Injection)*	*Gynergen (Oral)*	*Cafergot (Oral)*	*Caffeine (Oral)*	*E.C. 112 (Rectal)*	*E.C.B.P. 163 (Rectal)*
Degree of Relief	Excellent	20 (80%)	15 (60%)	1 (4.5%)	6 (18%)		5 (20%)	36 (72%)
	Good	5 (20%)	7 (28%)	2 (9%)	12 (35%)	1 (6%)	9 (36%)	13 (26%)
	Fair			1 (4.5%)				
	Poor-None		3 (12%)	18 (82%)	15 (44%)	15 (88%)	11 (44%)	1 (2%)
	Worse				1 (3%)	1 (6%)		

SUMMARY

The degree of relief of heredity cephalalgia has been evaluated after the use of four drugs (ergotamine tartrate, caffeine, bellafoline substance and pentobarbital sodium) administered either singly or in various combinations, by subcutaneous, oral and rectal routes, with the following results:

1. Ergotamine tartrate (Gynergen), subcutaneously, is the most effective of these four drugs in relieving an attack of hereditary cephalalgia.

2. E.C.B.P. 163 (ergotamine tartrate 2 mgs., caffeine 100 mgs., bellafoline substance 0.25 mgs. and pentobarbital sodium 60 mgs.) in suppositories, is almost as effective as ergotamine tartrate, subcutaneously, and has the advantage of easy administration.

3. Cafergot, orally, and E.C. 112 (ergotamine tartrate 2 mgs. and caffeine 100 mgs.) rectally, have almost the same degree of effectiveness, showing that oral and rectal routes are equally efficacious, with the latter having the advantage in cases of nausea and vomiting.

4. The combination of ergotamine tartrate with pentobarbital sodium, rectally, is more effective than E.C. 112, but not as effective as E.C.B.P. 163.

3720 Washington Ave.

* Thanks are due to Mr. Sidney H. Lane of the Sandoz Pharmaceutical Company for supplying most of this material for clinical investigation.

BIBLIOGRAPHY

1. Bankoff, M. L.: Use of Rectal Suppositories in Treatment of Migraine Headache, J. Indiana M.A. **44**:836-838 (September) 1951.
2. Blumenthal, L. S., and Fuchs, M.: The Use of Ergot-Caffeine Suppositories in Migraine, M. Ann. District of Columbia **19**:77-79 (February) 1950.
3. Charles, C. M.: Treatment of Heredity Cephalalgia, Post-Grad. M. J. **7**:33-35 (January) 1950.
4. Fuchs, M., and Blumenthal, L. S.: Cafergot Suppositories in Migraine, Ann. Allergy **9**:616-620 and 700 (September-October) 1951.
5. Kadish, A. H.: Clinical Observation on the Rectal and Oral Use of Various Ergot Derivatives in Headaches, New England J. Med. **242**:581-584 (April) 1950.
6. Reisman, E. E.: The Use of Experimental Suppositories in Treating Refractory Migraine, Am. Practitioner & Dig. Treat. **3**:308-310 (April) 1952.
7. Ryan, R. E.: Treatment of Headaches; Four New Agents Compared with Cafergot and E.C.B.-210, J. Missouri M.A. **48**:106-108 (February) 1951.
8. Ryan, R. E.: A New Agent for the Treatment of Migraine and Histaminic Cephalalgia, J. Missouri M.A. **48**:963-965 (December) 1951.
9. Ryan, R. E.: An Otolaryngologist's Viewpoint of the Different Diagnoses and Treatment of Certain Types of Headaches, J. Missouri M.A **49**:899-902 (November) 1952.

The Physician's Bulletin

In step with the busy schedule of today's doctor, Eli Lilly and Company has conceived an entirely new format for its house publication *The Physician's Bulletin*. Starting in January, 1953, the new "PB" is designed to give brief, concise information in a handy form to the 150,000 doctors who receive it.

The publication changes from its former 8½ by 11 size to a new 5 by 7¾ "pocket-book" size. Also, it has been increased from twenty-four to thirty-two pages. Brevity will be the keynote in the copy, and full color illustrations will be used throughout. Formerly published six times a year, the new "PB" will be issued ten times a year, appearing every month except August and December.

The Physician's Bulletin is edited by S. O. Waife, M.D., with the assistance of other physicians who serve fulltime on the Lilly staff.

BANTHINE THERAPY FOR ENURESIS

JAMES F. O'MALLEY, M.D.
KANSAS CITY, MISSOURI
AND
ROBERT H. OWENS, M.D.
KANSAS CITY, MISSOURI

ENURESIS HAS been described as repeated involuntary micturition after the age of 3. Of course, the age cannot be dogmatically fixed but most children do have voluntary control after that age. True enuresis should be distinguished from pseudoneuresis. In the latter, the child has developed normal control but reverts to bed wetting at various intervals.

The incidence of true enuresis varies from 16 to 26 per cent in various series. Holt and Holland feel that bed wetting is purely a habit often associated with other habits which indicate an unstable personality. Other investigators feel there are more specific defects in the neurophysiologic mechanism in these individuals. Grulee and Eley[1] find that the two common factors in these patients are the strong familial tendencies and that these patients maintain an irritable bladder throughout life even though they have stopped being enuretic. McLellan[2] did a series of cystometric examinations on enuretic patients and found that in spite of the fact that there was a normal bladder capacity, when the desire to void was obtained, there was a severe urgency and even a strong sustained uninhibited contraction of the bladder. In some patients he found intermittent rhythmic contractions of the detrusor muscle after each 25 to 75 cc. increments.

CHART I

INNERVATION OF THE BLADDER

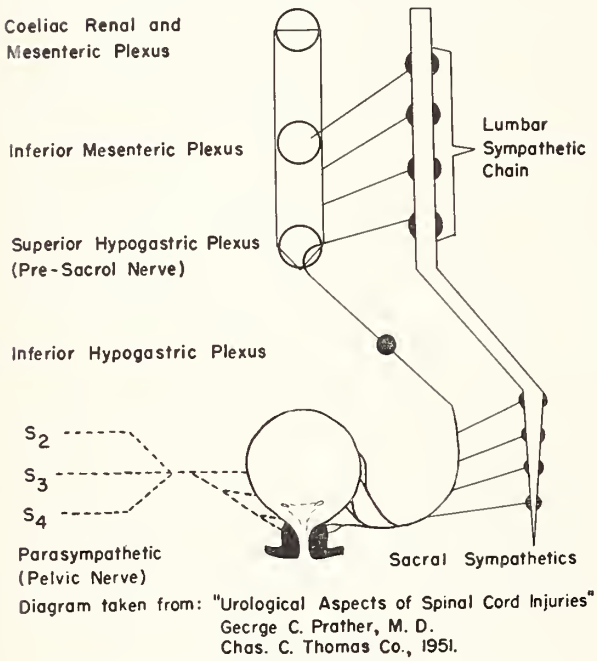


Fig. 1. Innervation of the Bladder. Diagram taken from "Urological Aspects of Spinal Cord Injuries," George C. Prather, M.D., Charles C Thomas Co., 1951.

NEUROPHYSIOLOGY OF THE BLADDER

We should like to review the neurophysiology of the bladder in an effort to show the rationale of Banthine therapy.

The present concept of the innervation of the bladder in man is given in figure 1. The increase in intravesicle pressure causes a stretch reflex to be mediated through afferent nerves in the pelvic parasympathetics and carried to the sacral segments of the cord. Here, efferent impulses over the parasympathetics stimulate the detrusor muscle to a vigorous and sustained contraction. Before urination occurs the internal sphincter of the bladder has to open. Denny-Brown and Robertson[3] believe that the internal sphincter contracts and relaxes as a reciprocal mechanism of the detrusor muscle. The external sphincter of the bladder relaxes after the internal sphincter opens. It can be closed voluntarily but it will relax only on a reflex basis. The cerebral cortex controls micturition by inhibiting the reflex stimulation of the detrusor muscle and by voluntarily contracting the external sphincter. It was found by Masso and Pellacarri[4] that an intravesicle pressure of 19 cm. of water caused the desire to urinate in the average man. This desire was related to the pressure and not the amount of fluid. They felt that by voluntary inhibition the bladder could undergo diastole and tolerate the increase in fluid. They also found that psychic factors had an influence on intravesicle pressure. Denny-Brown and Robertson[5] state that willed effort can produce voluntary contractions of the bladder which do not differ from spontaneous contractions. They believe this is a release of cerebral inhibition rather than voluntary stimulation of contraction.

It has long been known that atropine and belladonna derivities would reduce bladder irritability in certain spastic bladders. Banthine, according to W. E. Hambourge,[6] was twice as effective as tetra ethyl ammonium chloride in causing suppression of the pelvic nerve stimulation of the bladder. For this reason, Banthine has been used to treat irritable bladders, cystitis and Hunner ulcer. Since it is believed by many that the bladder of the enuretic patient is an irritable bladder with a tendency toward uninhibited contractions, we have chosen to use Banthine to treat enuresis. By inhibiting the local reflex with Banthine the bladder will gain more capacity and accommodate a larger volume without an increase in intravesicle pressure. In this way in spite of poor cerebral in-

Banthine-B diethyl amino ethyl xanthene-9-carboxylate methobromide, G. D. Searle & Co.

From the Section of Urology, Surgery Department, University of Kansas Medical Center, Kansas City 12, Kansas.

hibition adequate inhibition will be maintained at the reflex level.

Two cases of enuresis treated with Banthine are reported in detail and nine more are charted to total eleven cases treated with Banthine.

REPORT OF CASES

Case 1. J. M., a 9 year old white male was first seen on March 20, 1952, because of enuresis. He had wet the bed nightly since birth. All attempts at therapy had failed.

Physical examination revealed a normal child in all respects except for the persistent enuretic behavior. All laboratory studies to rule out organic disease of the nervous system of genito-urinary tract were normal and there were no congenital deformities of any system.

A chart was kept for one week before therapy was instituted. During this time he had involuntary micturition one to two times nightly. He was placed on Banthine, 25 mg. at bed time with no significant improvement. The dosage was increased to 50 mg. at bed time with total success for two weeks. The Banthine was stopped and the patient was symptom free for two more weeks and then relapsed. A three week course of 75 mg. of Banthine was then given and the patient has continued symptom-free for the last five weeks.

TABLE 1. REPORT OF ELEVEN CASES

Case	*Age*	*Sex*	*Dose mg.*	*Weeks on Drug*	*Weeks Observed*	*Reaction*	*Results*	*Relapses*
1	10	F	25	2	8	None	Good	
2	11	M	25	2	8	None	Good	
3	5	F	25-50	3	7	None	Fair	Twice
4	11	F	25	2	8	None	Good	
5	9	M	25-75	5	5	None	Fair	Twice
6	7	M	50	2	8	None	Good	
7	5	M	25	2	8	None	Good	
8	5	F	25	2	8	None	Good	
9	15	M	75	3	6	None	Good	
10	15	M	50	4	4	None	Good	
11	9	M	50	3	3	None	Fair	Twice

At no time did we observe any untoward effects from the drug. The psychologic relief and new confidence of the child was noteworthy.

Case 2. A. M., a 15 year old white male was first seen on May 8, 1952, complaining of enuresis since birth. All the usual treatments had been tried with occasional periods of relief, the longest such period being four days.

The general physical examination was normal except for simple obesity and psychologic testing revealed a repressed personality with average intelligence.

The patient was started on 50 mg. of Banthine with phenobarbital at bed time and limitation of fluids for one hour before bed time. The immediate relief of enuresis has been remarkable and he has not wet the bed once during the month he was on therapy. He has now been off of medication for one month with no relapse.

SUMMARY

We have treated eleven cases of long standing enuresis with Banthine at bed time. The ages in the group range from 5 to 15. We have had complete success in eliminating bed wetting in most cases after a short course of therapy. We have had only three patients relapse and by increasing the dosage of Banthine these were overcome. In the event of any recurrence we would reinstitute a short course to maintain the new habit of continence.

CONCLUSIONS

We feel that with Banthine we are able to establish the habit of continence. The suppression of the poorly inhibited reflex allows the bladder to accommodate large amounts of fluid without reflex voiding. The self assurance gained by the patients should improve the psychologic aspects of the problem. To be able to shed the enuretic habit by simply taking a pill at bed time certainly is a great improvement over the hourly awaking schedules, severe fluid restrictions, allowing the patient to sleep in a wet bed and the many other methods that have been advocated.

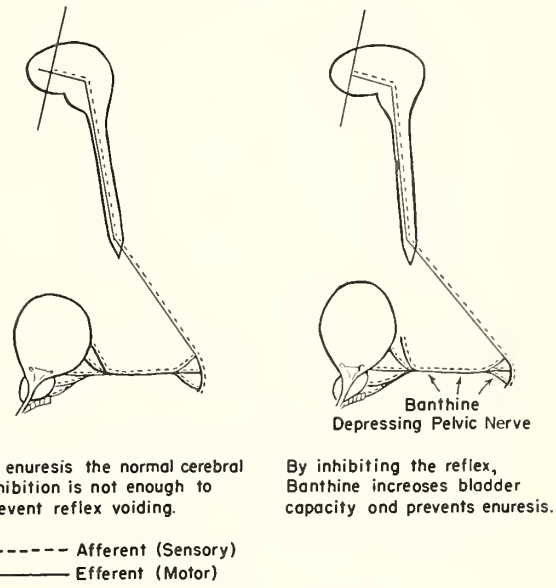


Fig. 2. Banthine and Enuresis.

University of Kansas Medical Center

BIBLIOGRAPHY

1. Grulee, C. G. and Eley, R. C.: The Child in Health and Disease, The Williams and Wilkins Company, Baltimore, 1952.
2. McLellan, F. C.: The Neurological Bladder, Charles C Thomas, Springfield, 1939.
3. Denny-Brown, D., and Robertson, E. G.: The State of the Bladder and its Sphincters in Complete Transverse Lesions of the Spinal Cord and Cauda Aquina, Brain, **56**:397, 1933.
4. Masso, A., and Pellacarri, P.: Sur les Fonctions de la Vessie, Arch Ital. de Biol. **1**:291, 1882.
5. Denny-Brown, D., and Robertson, E. G.: Physiology of Micturition, Brain **56**:149, 1933.
6. Hambourger, W. E.; Cook, D. L., and Green, D. M.: Antagonism of Cholinergic Triad by B-diethylaminoethyl xanthene-9-carboxylate methobromide (Banthine Bromide), Fed. Proc. **9**:281 (March) 1950.

Readers' Review

Antibiotics in Gastrointestinal Disease:

"Objectives of treatment: (1) Prevention of infections after abdominal surgery and (2) control of those infections primarily involving the digestive tract. None of the available antibiotics satisfies the criteria of the ideal intestinal antiseptic. In ulcerative colitis and regional ileitis, antibiotics are of value chiefly in controlling secondary infection. In diseases such as Salmonella and Shigella infections and typhoid, they are primarily bacteriostatic or suppressive and ultimate recovery is dependent upon immunity of host." Kirsner, et al. *Arch. Int. Med.*, November, 1952.

The first objective is better met by the present antibiotics but timing is very important—usually three to five days of treatment prior to surgery gives good results. Therapeutic failures regarding second objective attributed to inadequate dosage, error in diagnosis, acquired resistance or omission of valuable auxiliary measures. A valuable guide is given in the article to the present antibiotic or choice in several conditions. Uncomfortable complications are so frequent that great care should be exercised in the use of these antibiotics. Harold D. Ridings, M.D., Internal Medicine, *Cape Girardeau.*

Rupture of Uterus:

Reviewing 16,654 deliveries at Duke Hospital found thirteen ruptured uteri. In five cases definite delay in diagnosis. In such cases following signs should lead to suspicion of occult rupture: (1) Lack of descent with good labor and favorable presentation, (2) suprapubic pain and bladder tenesmus, (3) unexplained maternal tachycardia, (4) cessation of fetal heart beat, (5) unexplained hemorrhage. X-ray findings: Signs of fetal death with fetus occupying upper abdomen, a soft tissue pelvic mass representing uterus, and distention of intestine caused by hematoperitoneum. Ingram, et al. *Am. J. Obst. & Gynec.*, **64**:527, 1952.

Fortunately rupture of uterus is uncommon, but is an accident of such gravity it would be wise for anyone doing obstetrics to be well informed on subject. As pointed out, clinical picture is not always clear, may test diagnostic acumen of physician. Urge careful study of article and detailed cases presented. Francis R. Burns, M.D., Obstetrics and Gynecology, *Hannibal.*

Treatment of Obesity:

Obesity a major hazard to health and life itself, predisposing to many serious illnesses. Practically all obesity is exogenous due to overeating, only 3 per cent endogenous or secondary to endocrine or other inherent abnormality. Fundamentally due to a disproportion between caloric intake and caloric need. Therefore treatment lies in diet adequate in protein and low in fat and carbohydrate. Also important are psychologic problems influencing increase in appetite. Use of drugs decried unless indicated for other associated disease. Vitamin supplements recommended and a harmless drug bofore meals condoned chiefly on a psychologic basis. Exercise should be prescribed but is of little value in causing loss of weight. *Am. J. Med.*, October, 1952.

This conference emphasizes those oft repeated maxims in treatment of obesity; enforce a low caloric diet, use psychotherapy and prescribe drugs only when indicated for underlying conditions. Allen I. Herman, M.D., Internal Medicine, *St. Joseph.*

New Technic in Primary Tendon Repair:

A new type pull-out suture (12 inch strand of braided tantalum wire with a barb 4 inches from one end) used to approximate tendon ends. This one wire is started in proximal segment ½ inch above transection and is passed distally in center of tendon into center of distal segment for 1 inch and then brought out through tendon, soft tissue and skin, distal to wound. Pull on distal end of wire engages barb in proximal segment and removes tension from approximated ends. Both ends of wire are fastened over skin buttons. Wire is removed after healing by being pulled out proximally. *Surg., Gynec. & Obst.*, November, 1952.

This method is essentially a modification of the Bunnell pull-out wire technique. It is much more simple and still complies with best principles of tendon repair. Results obtained in repair of flexor tendons within flexor digital sheaths are undoubtedly better than results obtained from primary suture with silk. I believe this will prove a helpful adjunct in applying basic principles of tendon repair. William H. Snead, M.D., Orthopedics, *Springfield.*

Liver Changes With Infectious Mononucleosis:

Hsia and Gellis studied sixty-two children with a presumptive diagnosis of infectious mononucleosis, found 84 per cent with a heterophile titer of 1:56 (or higher) showed liver involvement as shown by liver function tests. Important for every patient with infectious hepatitis to have heterophile studies to rule out infectious mononucleosis since heterophile is not abnormal in infectious hepatitis. Not clear whether patients with infectious mononucleosis (with positive liver function tests) suffer with diffuse hepatitis or whether the disease alters serum proteins without giving rise to hepatitis. Especially questionable in children because of the alteration in serum protein pattern resulting from recent immunizations. *Am. J. Dis. Child.*, August, 1952.

Because of persistent flocculation in four of twelve children with infectious mononucleosis (followed for long intervals) and considering the pathologic similarity between infectious mononucleosis and infectious hepatitis, advisable for the present to treat such children for diffuse hepatitis. Daniel B. Landau, M.D., Pediatrics, *Hannibal.*

Postgraduate Review

THE SURGICAL MANAGEMENT OF HYPERSPLENISM

ROBERT M. ZOLLINGER, M.D.
COLUMBUS, OHIO

THE SPLEEN HAS become of increasing interest to clinicians in recent years. Formerly, surgery of the spleen was largely concerned with splenectomy for symptomatic splenomegaly or traumatic rupture. At the present time renewed interest in the spleen has come about chiefly because of the newer developments in the treatment of portal hypertension by splenorenal shunt. Furthermore, there has been a more widespread recognition of the various clinical syndromes due to overactivity of the spleen—so-called hypersplenism. The physician, therefore, has an increasing number of indications for recommending splenectomy. Likewise, the surgeon must be familiar with the various indications for splenectomy and the problems they present before, during and after operation. Experiences with 210 consecutive patients with hypersplenism, referred by the department of hematology for splenectomy during the period from April 1, 1946, to October 1, 1952, will be presented.

The syndrome of hyperplenism indicates an increase in the breakdown of one or more elements of the blood by the spleen.[1, 4] Excessive destruction of platelets results in essential thrombocytopenic purpura; destruction of red cells produces hemolytic anemia; destruction of neutrophils produces splenic neutropenia[5]; and if all three elements are destroyed as a result of hypersplenism, the clinical disease is known as primary pancytopenia.[2] If this disease process occurs on a congenital or hereditary basis, it is known as primary hypersplenism. Splenectomy in this group of diseases will usually effect a cure of the primary hypersplenic syndrome. Of the 210 patients having splenectomy, 124 were classified as having primarv hypersplenism (table 1). Seventy-six cases, or 61 per cent of the group, were proven to have primary thrombocytopenic purpura. Thirty-three cases, or 27 per cent, were classified as congenital hemolytic anemia. Of the remainder, 7 per cent were primary splenic neutropenia and 5 per cent primary pancytopenia.

TABLE 1

HYPERSPLENISM

	Total Cases	*Mortality Per Cent*
Primary (59 per cent)	124	1.6
Secondary (41 per cent)	86	12.8
Total	210	6.2

When hypersplenism occurs as a complication of a chronic disease, it is known as secondary hypersplenism. Eighty-six of the 210 patients had splenectomy for secondary hypersplenism (see table 1). In this group, hemolytic anemia (forty cases or 47 per cent of the entire group) was the prevalent type. The second most common group was splenic neutropenia which included twenty-two cases, or 25 per cent, of the secondary group. This rather high percentage was due to the fact that a number of patients with the Banti syndrome, manifesting evidence of hypersplenism, were included. There were eleven cases of secondary thrombocytopenic purpura and thirteen cases of secondary pancytopenia. The clinical picture of secondary hypersplenism is the same as that of primary hypersplenism but occurs as a complication of a number of chronic diseases such as chronic leukemia, Banti's disease, Gaucher's disease and certain infections (table 2). For convenience, I have included two more disease entities, acquired hemolytic anemia and neutropenia of Felty's syndrome, as secondary hypersplenism, although I realize that there is no known associated complicating disease. Splenectomy may prolong life in the patient with secondary hypersplenism, or establish a more favorable hematologic state, but it will not alter appreciably the eventual outcome of the primary disease.

TABLE 2

SECONDARY HYPERSPLENISM (86 CASES): COMPLICATING DISEASES

Known (74 per cent)	*Number Cases*
Leukemia	26
Banti's disease	14
Gaucher's disease	8
Infections	7
Boeck's sarcoid	5
Hodgkin's disease	4
Unknown (26 per cent)	
Acquired hemolytic anemia	17
Felty's syndrome	5
Total	86

Since surgery is frequently recommended in these cases despite alarming deficiencies in blood cells or platelets which cannot be replenished to the commonly safe preoperative level, it is essential that the preoperative diagnosis be correct. The absolute prerequisite for good results of splenectomy in the hypersplenic state is the preoperative confirmation of the diagnosis by a competent hematologist. Such a diagnosis is invariably based upon bone marrow studies as well as peripheral blood cell counts. Caution must be exercised in the differential diagnosis since bone marrow replacement, toxic drugs and frequently seen

Professor and Chairman Department of Surgery, the College of Medicine and the Surgical Service, the Medical Center, Ohio State University.

Read before the Kansas City Surgical Society, November 12, 1952.

industrial toxins may produce a peripheral blood pattern similar to that of hypersplenism. Bone marrow hyperplasia for the specific cytopenia is always present. Further confirmation of the spleen as the etiologic factor in the production of a specific cytopenia may be obtained with the epinephrine test. The diagnosis was established in each case by the hematology department prior to the recommendation for splenectomy. Under these circumstances, a satisfactory outcome can be anticipated if a few details of preoperative care are followed by painstaking technic in splenectomy.

Despite differences in preoperative conditions affecting surgical risk, the preparations for splenectomy in cases of primary and secondary hypersplenism are similar. Individual considerations must be given, however, to the specific cytopenias, with special preparations for patients with thrombocytopenic purpura and hemolytic anemia. Although ACTH and cortisone have been given to some of the more recent cases, especially those with hemolytic anemia, the use of these drugs so far has not altered the usual well defined indications for splenectomy.

In patients with thrombocytopenic purpura there is a marked lowering of blood platelets predisposing to hemorrhage into the skin, mucous membranes and central nervous system. These patients often present an alarming situation to the surgeon with limited experience in hypersplenism. There was a bleeding tendency in 100 per cent of our eighty-seven patients with evidence of bleeding into the skin or from the mucous membranes. Furthermore, in 43 per cent of these patients the platelet count was 0 to 10,000 per cubic millimeter at the time splenectomy was accomplished. Although fresh whole blood transfusions immediately preceding and during the operation may raise the platelet count to a limited extent, these patients must frequently be accepted for operation despite the absence of platelets. Since cerebral hemorrhage is a definite threat in patients with markedly lowered circulating blood platelets, early or emergency splenectomy may be advised by the hematologist. Cerebral hemorrhage occurred in 4 per cent of the eighty-seven cases of thrombocytopenic purpura, clearly indicating the need for earlier operation. Although the patient may show evidence of an extensive cerebral hemorrhage, this is no contraindication to splenectomy since marked improvement may usually be expected to follow operation and since prevention of further such episodes will be accomplished. Two patients, one with hemiplegia and another in coma, with acute cerebral hemorrhage due to thrombocytopenia, responded to splenectomy with complete return of neurologic function. The surgeon can proceed with confidence despite the absence of platelets provided the diagnosis, as previously mentioned, has been substantiated by bone marrow and other studies routinely carried out by the hematologists.

The hypersplenic patient with hemolytic anemia presents a special problem which may be even more trying to the surgeon than that presented by a patient with thrombocytopenic pupura. There were seventy-three cases of hemolytic anemia in this group of 210 patients. Despite the fact that severe anemia frequently exists in these patients, preoperative transfusions are usually contraindicated because of the danger of precipitating of a hemolytic crisis. As a result, transfusions cannot be given to raise the hemoglobin and red cell count to the normally accepted levels believed safe for major abdominal surgery. As a matter of fact, the hemoglobin level was below the minimal acceptable standard of 10 gm. in 68 per cent of these seventy-three patients. Furthermore, in 50 per cent of the patients, the red cell count was below 2.5 million. Occasionally it may be necessary for the surgeon to accept a patient with hemolytic anemia for splenectomy despite the fact that the red cell count may be at a level of one million or even lower, especially in the presence of an acute hemolytic crisis.

The precipitation of a hemolytic crisis by the transfusion of matched blood or even resuspended cells presents a greater danger than does the undertaking of splenectomy in the patient with severe anemia. Twenty-five per cent of these patients had already had a hemolytic crisis, although transfusions had not been given. The danger of further crisis from transfusions is a real one, and there seems no way to determine prior to transfusion in which patients transfused blood will not hemolyze. Several of the patients with secondary acquired hemolytic anemia were given transfusions prior to the confirmation of the diagnosis of hypersplenism or with the hope that slowly given transfusions might raise the hemoglobin level and better prepare the patient for surgery. In three patients severe hemolytic reactions occurred. In two of these this resulted in severe icterus and a hemoglobin and rel cell count lower prior to operation than at the time of admission to the hospital. Experience has shown that splenectomy in these patients without preoperative transfusions is wiser.

The transfusion of whole blood is avoided until after the ligation of the splenic artery. It is obvious, therefore, that the surgeon must be prepared to perform splenectomy with a minimum of blood loss. Furthermore, he must have a thorough understanding of the anatomy to facilitate the approach to the splenic artery in order that it may be ligated rapidly and transfusions can be given. As soon as the splenic artery is ligated, the hemolytic process is stopped and the remainder of the operation can be continued safely.

The use of antibiotics to control the frequent recurrent infections seen in patients with splenic neutropenia and associated with the lowered neu-

trophil counts is of the greatest importance. Transfusions may be given to patients with splenic neutropenia, in contrast to hemolytic anemia and thrombocytopenic purpura, at any time they are needed, but it should be realized that no significant rise in the white cell count will be effected by transfusions.

The neutrophil count in these patients may vary considerably from time to time, with frequent remissions of the neutropenia. For this reason, splenectomy is usually safer when performed while the neutrophil and total leukocyte counts are at one of their higher peaks; at that time postoperative infections are less likely to occur. However, operation should not be delayed in those cases in which severe neutropenia persists.

Of the thirty-one cases of splenic neutropenia, twenty-two were associated with other chronic disease processes, thus showing the greater incidence of secondary splenic neutropenia as compared with primary neutropenia. There were fourteen cases in which Banti's disease was associated with secondary neutropenia. The development of a routine technic of splenectomy for all types of hypersplenism, with painstaking technic, including delayed ligation of the splenic vein, has made possible the utilization of this vein in the performance of a venous shunt in the presence of portal hypertension.

Panhematocytopenia, presenting a depression of all the circulating formed elements, is the least common of the forms of hypersplenism. In the six cases of primary panhematocytopenia and the thirteen cases of secondary panhematocytopenia, the indications for transfusions and antibiotics in the preoperative period were carefully determined by the hematologists. Although it should be realized that if thrombocytopenia predominates fresh whole blood is desirable and, if anemia predominates transfusions may best be deferred, these decisions must rest in the hands of a competent hematologist.

The most satisfactory anesthetic procedure for splenectomy has been the induction of anesthesia with thiopental sodium followed by the use of cyclopropane for maintenance. Curare or one of its derivatives is used to provide relaxation, and ether may be added to the anesthetic mixture if necessary. The quantity of anesthetic required by many of these anemic and debilitated patients is less than usual.

In patients with severe bleeding tendency, there may be bleeding from the nose, gums and pharynx before the induction of anesthesia. The presence of clotted blood and bloody mucus must not be allowed to produce mechanical obstruction of the respiration. Nasal pharyngeal and oral pharyngeal airways and endotrachial tubes should not be inserted because their presence may induce bleeding. In cases in which an adequate airway cannot be maintained, an endotrachial tube should be inserted gently.

The patient should be placed on the operating table with a pillow under the knees and kept in a moderate degree of reverse Trendelenberg position over an elevated gallbladder rest. A left paramedian incision is made, extending from high in the xiphocostal angle to the umbilicus. A combined thoraco-abdominal incision has not been used except in a few cases of Banti's disease with hypersplenism in whom a splenorenal shunt was planned and carried out.

Since the hematologic picture rapidly and frequently dramatically improves after ligation of the splenic artery, the surgeon should proceed directly to accomplish this, with delay of a general abdominal exploration until after the splenectomy. As soon as a window of sufficient size has been made into the lesser sac, retractors are inserted to pull the stomach upward and the colon and pancreas downward to permit visualization of the superior margin of the pancreas. While the splenic artery is often large and torturous, especially in the older age groups, it may be necessary to determine its location by palpation in the obese patient. The most readily accessible point is selected for ligation, regardless of the distance from the hilus of the spleen. The peritoneum is incised, and, with the use of a right angle clamp as a blunt dissector, a segment of the splenic artery is dissected free in order that a silk suture may be pulled through and subsequently tied.

The ligation of the splenic artery as one of the initial steps in splenectomy offers many advantages. In the first place, whole blood transfusions may be started in patients with low blood levels, especially those with hemolytic anemia. Second, the hematologic picture almost immediately begins to improve and oozing due to low platelet levels usually stops. Third, there is probably less blood loss with subsequent steps of the operation as a result of decreased pressure within the spleen itself. Fourth, splenic contraction ensues and provides an efficient method of providing an autotransfusion to the patient. Finally, ligation of the splenic artery results in firm contraction of the spleen with better definition of the various splenic ligaments, thus lessening the chance of rupture of the splenic capsule during its removal.

Although rapid mobilization and mass ligation of the splenic pedicle may be advisable in the presence of a ruptured spleen, the routine use of a painstaking technic with individual ligation of vessels will pay rich dividends, regardless of the indications for splenectomy. This is important for a number of reasons: (1) to keep blood loss to a minimum, (2) to assure a clean field free of hematomas, in order that accessory spleens may be more easily identified, (3) to avoid possible injury to the tail of the pancreas or the greater curvature of the stomach, where it is intimately attached to the upper pole of the spleen, and (4) to delay ligation and conserve as much as is required of the splenic vein for a splenorenal venous shunt,

which will be needed in cases of hypersplenism associated with Banti's disease.

After ligation of the splenic artery, the uppermost portion of the gastrosplenic ligament is divided and the contents of each pair of clamps ligated in order to permit clear visualization of the entire field free of clamps at all times. After this, the spleen is retracted toward the midline and the splenorenal ligament divided. Unless there are dense adhesions or portal hypertension, it is usually unnecessary to ligate any vessels in this ligamentous attachment. Great care must be exercised during this manipulation of freeing the spleen lest the splenic capsule be torn and excessive loss of blood occur or remnants of splenic tissue be left behind. Such remnants may persist, resulting in splenosis and the danger of possible recurrence of hypersplenism. After the spleen has been well moblized into the wound, the tail of the pancreas should be separated gently from its splenic attachment and any small pancreatic veins ligated. The splenic vein is the last vessel in the pedicle that is divided. The contents of all clamps are double ligated with a simple tie of No. 3-0 silk proximally and a transfixing suture distally.

During the splenectomy, one or more accessory spleens are commonly encountered and often removed with the spleen. If an accessory spleen is left in the patient, the same disease process may recur from several weeks to several years later.

The locations of accessory spleens and their identifications are important to the surgeon who performs splenectomy. Accessory spleens will be found in the following places, in the order of frequency: the splenocolic ligament, the retroperitoneal space at the under surface of the tail of the pancreas, the gastrocolic ligament, the gastrosplenic ligament, the hilus of the spleen, the splenorenal ligament, the greater omentum, and overlying the left kidney. The experienced surgeon should be able to differentiate between lymph nodes, hemolymph nodes and accessory spleens. All may be multiple in number, and, when there is any question as to the identity, they should be removed. One or more accessory spleens were found in 20 per cent of our patients with hypersplenism and were more frequent (22 per cent) in patients with primary hypersplenism.

At this time the entire abdomen is explored and the gallbladder palpated for the presence of stones. This is especially important in the patient with hemolytic icterus. Stones are frequently found and have been reported to occur in cases of hemolytic icterus with a frequency of 71 per cent.[3] In our patients, only 15 per cent were found to have gallstones. When the general condition of the patient was good, and exposure was easy, we have on occasion removed the gallbladder at the time of splenectomy, but ordinarily this has been deferred.

Other essentials necessary before closure of the abdomen consist of biopsies of the liver, retroperitoneal lymph nodes and a mesenteric lymph node. Studies of these biopsy specimens by the hematologist are of great value in the determination of the status of the reticulo-endothelial system and, on occasion, by the discovery of a lymphosarcoma, Hodgkin's disease or some other primary disease, may convert the diagnosis of primary hypersplenism to one of secondary hypersplenism. In addition, should the hematologic picture not improve in a satisfactory manner, a study of these biopsy specimens may enable the hematologist to make a better prognosis. This follows, since overactivity of the reticulo-endothelial system in general implies that removal of the spleen cannot be counted on for certain to improve the hematologic state for which the splenectomy was performed.

Abdominal drainage is not used and retention sutures are used only in debilitated patients with secondary hypersplenism. Three-zero and four-zero silk suture material is utilized throughout.

The surgical morbidity and mortality of splenectomy differ significantly in cases of primary and secondary hypersplenism. As might be expected, the results in patients with secondary hypersplenism, though satisfactory, are not as good as those in patients with primary hypersplenism.

SUMMARY

1. Two hundred and ten splenectomies were performed for hypersplenism between April 1, 1946, and October 1, 1952.

2. The overall postoperative mortality in this series was 6.1 per cent; the mortality in the 124 patients with primary hypersplenism was 1.6 per cent; and that in the eighty-six patients with secondary hypersplenism was 12.8 per cent.

3. Good results are dependent upon an accurate preoperative diagnosis by a competent hematologist followed by a meticulous technic in the performance of the splenectomy.

BIBLIOGRAPHY

1. Doan, C. A.: Hypersplenism, Bull. New York Acad. Med. **25**:625 (October) 1949.
2. Doan, C. A., and Wright, C.-S.: Primary Congenital and Secondary Acquired Splenic Panhematopenia, Blood **1**:10 (January) 1946.
3. Pemberton, J. de J., and Kiernan, P.: Surgery of the Spleen, S. Clin. North America **25**:880 (August) 1945.
4. Wiseman, B. K.: The Spleen, Hypersplenism, and the Blood Dyscrasias, Health Center J. **1**:21 (December) 1947.
5. Wiseman, B. K., and Doan, C. A.: Primary Splenic Neutropenia: A Newly Recognized Syndrome, Closely Related to Congenital Hemolytic Icterus and Essential Thrombocytopenic Purpura, Ann. Int. Med. **16**:1097 (June) 1942.
6. Zollinger, R. M.; Martin, M. M., and Williams, R. D.: Surgical Aspects of Hypersplenism, J.A.M.A. **149**:1 (May) 1952.

Buy

U. S. Savings Bonds

Case Report

PNEUMOTHORAX COMPLICATING PNEUMOPERITONEUM THERAPY

REPORT OF A CASE WITH ASSOCIATED PLEURAL AND PERITONEAL EFFUSION

JOHN T. LAWTON, M.D.
ST. LOUIS

SPONTANEOUS PNEUMOTHORAX is an uncommon but not rare complication of therapeutic pneumoperitoneum. When the condition occurs in association with the disappearance of abdominal air, the pneumoperitoneum may be considered the source of the pneumothorax. Ross and Farber[1] reviewed five previously reported cases,[2-6] one fatal,[5] described three cases of their own and mentioned twelve other cases obtained by questionnaire from California chest physicians. Smith[7] witnessed a fatal collapse of both lungs during the induction of pneumoperitoneum to demonstrate tuberculous mesenteric nodes. Recently, there have been published reports of three additional cases.[8-10] During the last one and one half years, similar complications have occurred on four occasions at the Robert Koch Hospital near St. Louis.[11] The incidence is probably greater than would be indicated by the paucity of reported cases. Right sided pneumothorax has been present in every instance.

The following case is reported because of the association of rather marked peritoneal effusion with hydropneumothorax at the time of the collapse, a situation not mentioned in previous accounts.

CASE REPORT

A 34 year old white female carnival singer was admitted to the St. Louis City Hospital on May 27, 1952, complaining of sudden pain in the right scapular region and shortness of breath. In June 1950 she had been diagnosed as far advanced pulmonary tuberculosis and was hospitalized at Mercy Hospital, Springfield, Ohio. She remained there six weeks, receiving daily streptomycin and para-aminosalicylic acid. Sputum, positive for acid-fast bacilli on admission, reverted soon after therapy was begun. Cavitation was present in the left upper lobe, but the entire right lung was apparently clear. On June 20, 1950, she received a left phrenic crush with good result, and two days later pneumoperitoneum was instituted. Thereafter she received pneumoperitoneum refills weekly, averaging 1,000 cc. with each introduction.

On July 23, 1950, she was released from the hospital to remain on bed rest at home with PAS and weekly pneumoperitoneum refills. On October 12, 1950, she entered the Florida State Sanitarium, Orlando, Fla., where she was continued on pneumoperitoneum and bed rest with gradually increasing activity. Shortly after admission a sputum culture was positive for tubercle bacilli, but thereafter all sputa examinations were negative. The pulmonary infiltration showed progressive clearing, and x-ray evidence of cavitation was no longer evident. On August 21, 1951, she was discharged from the hospital as an arrested case, but she continued to receive pneumoperitoneum refills every seven to ten days, with intra-abdominal pressures averaging plus 10 to plus 12 after the introduction of 1,000 cc. of air. All the pneumoperitoneum injections were given in the para-umbilical region 3 or 4 cms. to the left of midline. X-rays disclosed a small peritoneal effusion in November, 1951 (fig. 1). On March 14, 1952, an air filled, circular, thin walled bleb, 3 by 4 centimeters in diameter, was noted laterally above the liver by fluoroscopy and radiography (fig. 2). A similar smaller irregular marking was present laterally on the left side.

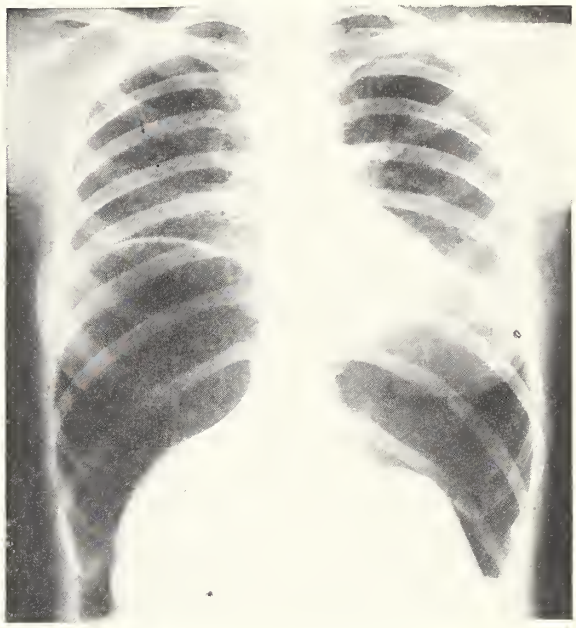


Fig. 1. November 28, 1951.

The patient began travelling with the carnival in late April 1952. In May she resumed singing, a job which, she insisted, entailed only slight activity. On May 23, 1952, she received a refill of 1,000 cc. of air from a St. Louis physician who noted the presence of a small quantity of peritoneal fluid. She continued to feel well until the evening of May 27, when, while sitting and chatting with a group of friends following a performance, she suddenly experienced sharp pain in the right scapular region which soon became generalized over the right chest associated with marked shortness of breath.

She was taken immediately to the City Hospital where she volunteered the information that her abdomen had become flattened simultaneous to the onset of chest pain and dyspnea. Examination disclosed a thin, moderately dyspneic young woman with hyperresonance and absent breath and voice sounds over

From the Saint Louis University Medical Service, Saint Louis City Hospital.
Instructor in Medicine, Saint Louis University School of Medicine.
Appreciation is expressed to Dr. H. H. Seiler, Tampa, Fla., for the use of two of his roentgenograms for this report.

the right hemithorax. There were no signs of mediastinal shift or cyanosis. The abdomen was soft and slightly distended. Hemogram and urine findings were within normal limits and the erythrocyte sedimentation rate (Wintrobe) was 4 mm. in one hour. X-ray confirmed the diagnosis of almost complete collapse

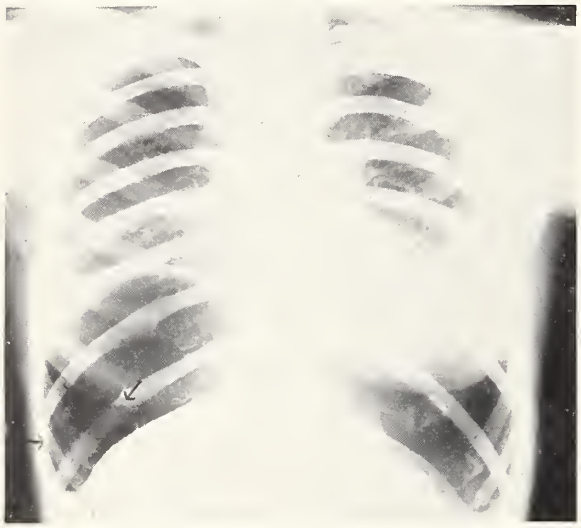


Fig. 2. March 14, 1952.

of the right lung with pneumothorax and a small quantity of fluid in the right costophrenic angle. In the abdomen were a rather large amount of fluid and only about two inches of air under the domes of the diaphragm (fig. 3).

Intrapleural pressures on the right ranged from plus 10 to plus 12. Immediately, 900 cc. of air and a few drops of straw colored fluid were removed from the intrapleural space. X-ray was repeated within two hours and showed a straight fluid level at the

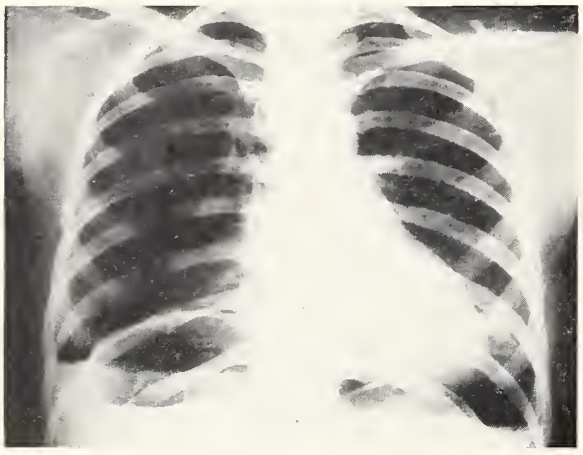


Fig. 3. May 27, 1952, 11:00 p. m.

fourth posterior intercostal space on the right and partial reexpansion of the lung (fig. 4). On the next day thoracentesis was performed twice with the removal of 1,200 cc. and 900 cc. of fluid, but the lung remained partially collapsed by hydropneumothorax. The intra-abdominal air seemed to decrease in amount. The pleural fluid was straw colored and clear with a specific gravity of 1.016; protein, 3.95 gm. per cent; sugar, 107 mg. per cent; 800 white blood cell per cm. with 25 segments, 60 lymphocytes and 15 eosinophils. Cultures on blood agar, thioglycollate broth and Loewenstein medium (Jensen-Holm modification) were sterile. Guinea pig inoculation failed to reveal the presence of tubercle bacilli. Two attempts were made to remove the peritoneal fluid at points in midline below the umbilicus, but no air or fluid could be obtained, probably because of loculation. Above the umbilicus a few cubic centimeters of air were aspirated, but the intra-abdominal pressure was insufficient for a manometric reading.

On the evening of May 28, two catheters were inserted into the right intrapleural space, one in the second anterior intercostal space and the other in the seventh intercostal space in the posterior axillary line. An under-water seal drainage was then begun. The next day the right lung had completely reexpanded and intrapleural fluid was not detectable on x-ray (fig. 5); 1,500 cc. of fluid had drained through the catheters. On the following day, another 800 cc. of fluid had been obtained from the intrapleural space.

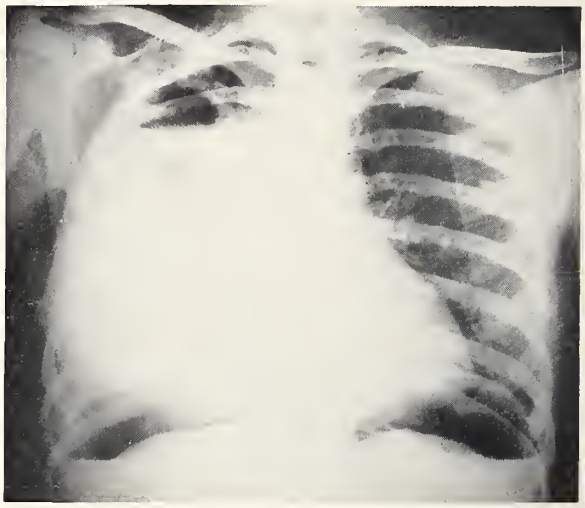


Fig. 4. May 28, 1952, 1:00 a. m.

The quantity of intra-abdominal air appeared to decrease slowly and progressively. The higher catheter was removed forty-eight hours, and the lower catheter, seventy-two hours, after introduction. The temperature reached 100.6 F. during the three days of drainage but was normal previously and during the rest of her hospital stay.

She continued to have occasional sticking pains in the right lower chest for a week, but otherwise the course was without incident. Ten sputa examinations were negative for acid-fast bacilli. She remained in the hospital for eighteen days on bed rest and was discharged asymptomatic to the care of a physician near her home. Her only additional therapy was penicillin during the first ten days, streptomycin, 1.0 gram daily for a week, then 1.0 gram twice a week until discharge, and PAS, 12 grams daily throughout hospitalization. The chest x-rays revealed no evident parenchymal changes from previous films, except an infiltrative area in the left cardiophrenic angle, interpreted as discoid atelectasis, which was clearing at the time of discharge (fig. 6).

DISCUSSION

Because of the relative frequency of spontaneous pneumothorax in pulmonary tuberculosis, the simultaneous loss of peritoneal air is a prerequisite in assigning the pneumoperitoneum as a causative agent. In this individual it was felt that the air gained access through the diaphragm for the following reasons: (1) the onset of symptoms of pneumothorax was simultaneous with the sudden disappearance of abdominal distention; (2) the initial right intrapleural pressure was high and, immediately after decompression, a large quantity of air and fluid entered the intrapleural space; (3) the quantity of air under the domes of the diaphragm was much less than at the time of her last refill and the intra-abdominal pressure was not positive enough to be measured; (4) the amount of air and fluid in the abdomen continued to decrease during water-seal drainage of the pleura, even after the pleura appeared free of air and fluid; (5) the bleb like, circular, air filled, linear membrane which appeared above the liver two months before the occurrence of the pneumothorax was interpreted as parietal pleura invaginated by abdominal air through an aperture in the posterolateral right hemidiaphragm. If peritoneal fluid could have been obtained, further proof of communication could have been by comparing chemically with pleural fluid or by injecting dye. After the catheter drainage had been instituted, it was impossible to demonstrate communication by changing the position of the patient,

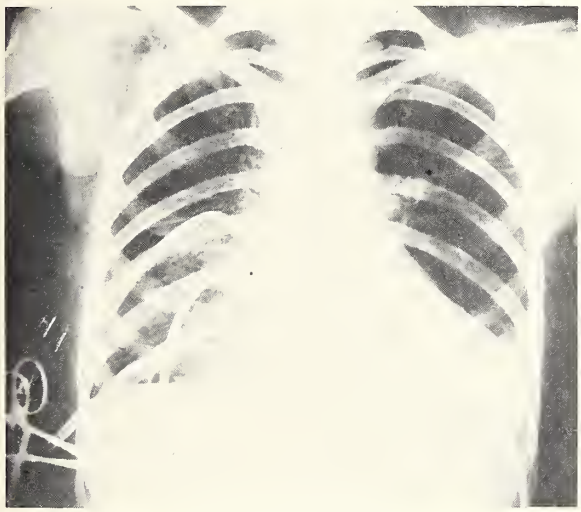


Fig. 5. May 29, 1952.

as had been shown successfully by Mellies[2] and Lumsden.[6]

Pneumothorax resulting from the direct injection of air accidentally into the intrapleural space rather than into the intraperitoneal space has occurred,[12, 13] but the possibility is obviated by the use of the para-umbilical instead of the subdiaphragmatic route of injection. Banyai[3] and Simmonds[1] believe that peritoneal air reaches the posterior mediastinum through the normal hiatuses, then bursts through the mediastinal pleura to the intrapleural space. Lack of demonstrable pneumomediastinum in this and other

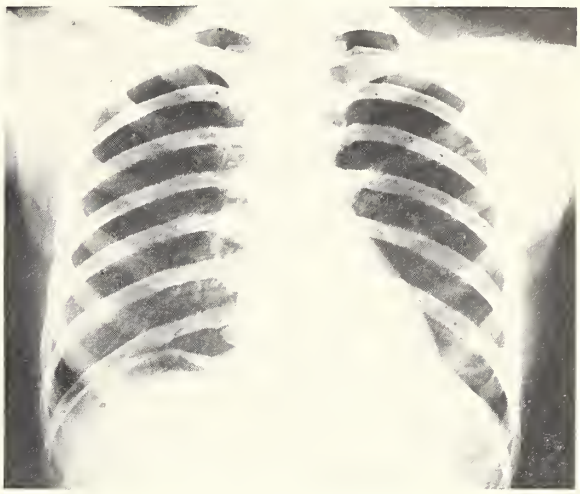


Fig. 6. June 10, 1952.

cases makes this view unlikely. Defects of inflammatory,[14] traumatic[15] and degenerative[16] nature may occur in the diaphragm, but only the second seems possibly operative in this instance. Since phrenic crush was done only on the left side and the right lung appeared free of disease, inflammation and atrophy seem improbable.

Most of the cases are probably due to stretching of the muscle fibers with a small rupture of the diaphragm with resultant bleb formation on the pleural surface, the bleb rupturing with sudden increase in intra-abdominal pressure. Lumsden,[6] Repa and Johnson[9] and Cope[1] (case 14) have observed such blebs during thoracoscopic examination. Yannitelli et al.[5] described a bleb like projection and opening in the right diaphragm postmortem which had been visualized previously on antemortem x-rays. Through the thoracoscope, Laird[16] has noted vesicles containing air separated by parietal pleura above the diaphragm in four persons with pneumoperitoneum, all of whom had paralyzed diaphragms. A slit like pleuroperitoneal canal may be opened by increasing intra-abdominal pressure,[6, 15] or the weakened area may be caused by imperfect development of the muscle or membrane of the diaphragm.[16] Small congenital defects may be present which are asymptomatic until the protection offered by the liver is removed by pneumoperitoneum.[7] In the presented case, a large bleb-like projection was present above the liver which, in retrospect, may have been supradiaphragmatic air evidently obtaining access through a posterolateral diaphragmatic opening. From this experience, the presence of

Table 1. *Cases of Pneumothorax Complicating Pneumoperitoneum*

Author, Year	Age, Sex	Pneumoperitoneum (PP)			Remarks
		Duration	Last Refill	Disposition	
1. Mellies, 1939[2]	16 F	3 wks.	one day	abandoned	On the 15th day, x-rays showed air & fluid in abdomen and rt. chest with the same pressure; communication demonstrated by change in position
2. Banyai, 1940[3]	53 M	12 mos.	one day	re-established without recurrence	Small amount of air persisted under the diaphragm after pneumothorax (PT)
3. Smith, 1943[7]	young F	induction	none	immediately fatal	Postmortem, bilateral PT; number of small holes in the diaphragm
4. Simmonds, 1946[4]	29 F	8 mos.	?	?	Small amount of air persisted under the left diaphragm; after care not recorded
5. Yannitelli, 1949[5]	16 F	1. 10 mos. 2. 6 mos.	1. 20 days 2. 9 days	re-established with fatal recurrence	Six mos. after PP re-est., fatal PT; postmortem, bleb-like projection & opening in the right diaphragm
6. Lumsden, 1949[6]	38 F	induction	none	abandoned	Immediate PT with loss of PP on induction; repeated 3 times with same results; thoracoscopy showed 2 sub-pleural air bubbles without change in size with PP induction
7. Street, 1950[8]	24 M	5 mos.	few hrs.	?	Previously established PT suddenly greater; after-care not recorded
8. Ross, 1951[1]	24 F	1. 14 mos. 2. 5 mos.	? ?	re-established with recurrence	PP abandoned following 2nd spontaneous PT 5 mos. after re-est. PP.
9. Ross, 1951[1]	58 M	16 mos.	few hrs.	re-established without recurrence	Asymptomatic 2 yrs. after PP re-est.
10. Ross, 1951[1]	20 F	16 mos.	5 days	abandoned; PT maintained	PP later re-established after loss of PT (pleural symphysis); asymptomatic 2 years later
11. Ross, cited by, 1951[1]	?	?	?	abandoned	
12. Ross, cited by, 1951[1]	?	?	?	abandoned	
13. Ross, cited by, 1951[1]	?	?	?	re-established twice with recurrence twice	PP abandoned after 3rd spontaneous PT
14. Ross, cited by, 1951[1]	?	?	?	abandoned; PT maintained	Pneumonolysis necessary; thoracoscopy revealed large bleb in diaphragmatic pleura (Cope)
15. Ross, cited by, 1951[1]	?	?	?	abandoned	
16. Ross, cited by, 1951[1]	?	?	?	abandoned; PT maintained	
17. Ross, cited by, 1951[1]	?	?	?	abandoned; PT maintained	
18. Ross, cited by, 1951[1]	?	?	?	abandoned	
19. Ross, cited by, 1951[1]	?	?	?	re-established twice with recurrence twice	PP abandoned after 3rd spontaneous PT
20. Ross, cited by, 1951[1]	?	?	?	abandoned; PT maintained	Pneumonolysis necessary
21. Ross, cited by, 1951[1]	?	?	?	re-established with recurrence	PT maintained; PP abandoned after 2nd spontaneous PT
22. Ross, cited by, 1951[1]	?	?	?	abandoned	
23. Repa, 1951[9]	22 M	15 mos.	13 days	abandoned	Thoracoscopy disclosed cystic mass, slit-like aperature on rt. hemi-diaphragm
24. Wu, 1951[10]	40 F	5 days	2 days	abandoned	PT decompressed by water-seal drainage

Author, Year	Age, Sex	Pneumoperitoneum (PP)			Remarks
		Duration	Last Refill	Disposition	
25. Cohen, 1952[11]	29 F	5 mos.	4 days	maintained	Rt. PT decompressed by aspiration; PP cautiously re-instituted after 10 days and maintained for 3 mos., discontinued as ineffective; pt. refused pneumonectomy
26. Pianetto, 1952[11]	23 M	3 mos.	7 days	abandoned	3 episodes of rt. PT within 6 weeks; PT finally decompressed by water-seal drainage; no recurrence when PP discontinued after 3rd PT
27. Russell, 1952[11]	22 F	15 mos.	3 days	abandoned	Rt. PT decompressed by aspiration; slow progressive clinical improvement thereafter
28. Kiyasu, 1952[11]	23 M	8 mos.	3 days	abandoned	Sudden complete disappearance of intra-abdominal air; refused resection surgery
29. Lawton, 1952	34 F	23 mos.	4 days	abandoned	PT decompressed by water-seal drainage

such a radiographic appearance should be suggestive of a diaphragmatic aperture and possibly imminent pneumothorax, and should effect reduction of intra-abdominal pressure by the discontinuation or reduction of pneumoperitoneum.

The delay in rupture following the injection of air has been a characteristic of this and other cases.[1, 5, 9, 10] The explanation[5, 17] is that intrapleural as well as intraperitoneal pressure is elevated immediately after refills, and the differential pressure may be greater a few days later. Since the incidence of peritoneal effusion during pneumoperitoneum therapy is only 1 to 3 per cent[18] the occurrence of rupture with hydropneumoperitoneum must be exceedingly rare. Peritonitis occurs in less than 1 per cent[18] of cases of pneumoperitoneum. However, the dangers of introduction and spread of infection are greatly magnified when both air and fluid have access to pleura and peritoneum and the possibilities of failure of expansion of the lung are increased. When the intra-abdominal pressure is decreased as air is removed or permitted to resorb, the liver assumes its usual position under the diaphragm and forms an effective barrier to the opening if infection is not present.

SUMMARY

Right pneumothorax complicating therapeutic pneumoperitoneum is discussed. Twenty-four cases from the literature are tabulated together with five additional recent cases in St. Louis. The first case in which rather marked peritoneal effusion was present at the time of rupture, resulting in hydropneumothorax, is presented in detail.

4903 Wabada Ave.

BIBLIOGRAPHY

1. Ross, J., and Farber, J. E.: Right-sided Spontaneous Pneumothorax Complicating Therapeutic Pneumoperitoneum, Am. Rev. Tuberc. **63**:67-75 (January) 1951.
2. Mellies, C. J.: Unusual Complication of Pneumoperitoneum, J. Missouri M. A. **36**:430-435 (November) 1939.
3. Banyai, A. L., and Jurgens, G. H.: Accidental Pneumothorax During Pneumoperitoneum Treatment, Am. Rev. Tuberc. **42**:688-690 (November) 1940.
4. Simmonds, F. A. H.: Air Embolism and Pneumomediastinum in Pneumoperitoneum, Lancet **1**:530-533 (April 13) 1946.
5. Yannitelli, S. A.; Woodruff, C. E.; Mueller, E. E., and Howard, W. L.: Fatal Tension Pneumothorax Resulting from Diaphragmatic Rupture in a Patient Receiving Pneumoperitoneum, Am. Rev. Tuberc. **60**:794-800 (December) 1949.
6. Lumsden, E. G. S.: Spontaneous Pneumothorax Complicating Artificial Pneumoperitoneum, Thorax **4**:147-152, 1949.
7. Smith, C. N.: Induced Pneumoperitoneum: A fatal Case, Brit. M. J. **2**:404, 1943.
8. Street, E. W.: Leakage of Air from Pneumoperitoneum into Pleural Cavity, Lancet **1**:669-670 (April 8) 1950.
9. Repa, J. J., and Jacobson, H. R.: Spontaneous Pneumothorax, the Result of a Ruptured Diaphragm Complicating Pneumoperitoneum. Am. Rev. Tuberc. **63**:587-590 (May) 1951.
10. Wu, J. F., and Neptune, W. B.: Pneumothorax as a Complication of Pneumoperitoneum, Am. Rev. Tuberc. **63**:710-713 (June) 1951.
11. Pruett, C. E.; Cohen, F.; Pianetto, M. B.; Russell, H. G,. and Kiyasu, R. K.: Personal communications.
12. Banyai, A. L.: Pneumoperitoneum Treatment, St. Louis, C. V. Mosby Co., 1946; chap. 8.
13. Gilmore, D. J.: Pneumoperitoneum with Diaphragmatic Paralysis in the Treatment of Pulmonary Tuberculosis, Dis. Chest **13**:153-161 (Mar.-Apr.) 1947.
14. Anderson, N. L., and Winn, W. D.: Pneumoperitoneum and Diaphragmatic Paralysis, Am. Rev. Tuberc. **52**:380-391 (November) 1945.
15. Harrington, S. W.: Various Types of Diaphragmatic Hernia Treated Surgically, Surg., Gynec. & Obst. **86**:735-755 (June) 1948.
16. Laird, R.: Comments on Total Thoracoscopy, Tuberc. **26**:149-153 (Sept.-Oct.) 1945.
17. Anderson, N. L.: The Rationale of Therapeutic Pneumoperitoneum, Dis. Chest **14**:732-738 (Sept.-Oct.) 1948.
18. Stein, H. F.: Complications of Artificial Pneumoperitoneum: A Review, Am. Rev. Tuberc. **64**:645-658 (December) 1951.

BOOK REVIEW

DYNAMIC PSYCHIATRY, Transvestism-Desire for Crippled Women, by Louis S. London, M.D. Corinthian Publications, Inc., New York, New York. 1952. Price $2.50.

This brief monograph is second in what is evidently intended to be a series along psychoanalytic lines. Only one case is dealt with. The subject had phantasies of women who are crippled, deformed, bearded or somehow physically abnormal. Numerous drawings are reproduced depicting the visualizations of such persons in complete detail, along with explanatory remarks by the patient. A short clinical account is appended.

Such cases are striking but not extremely rare. Phantasies are often specific. Perhaps this case is unusual in the number and richness of the visualizations.

"PREMARIN"®

Highly effective • Well tolerated • Imparts a feeling of well-being

"PREMARIN"

Most menopausal patients
experience striking relief
of symptoms with "Premarin."

"PREMARIN"

Estrogenic Substances (water-soluble)

"PREMARIN"

also known as Conjugated Estrogens (equine)

"PREMARIN"

5202 AYERST, McKENNA & HARRISON Limited • New York, N. Y. • Montreal, Canada

Ayerst

Special Articles

PROFESSIONAL RELATION BETWEEN PHYSICIANS AND PSYCHOLOGISTS

R. O. MUETHER, M.D.
ST. LOUIS

THE PROFESSIONAL relationship between the physician and the psychologist is, primarily, a question of scientific cooperation and, as such, is a broad problem not limited to any special group or groups.

The guide to this problem, as it is in all such problems, is the welfare of the patient. That which contributes to the greatest good of the patient is always the proper course of conduct for any branch of medicine to pursue.

Clinical psychology, a relatively new science, burst perhaps too suddenly upon us, crowding, as it did, upon the heels of that other new science, psychiatry, and complicated by the fact that the two were joined together in a sort of military wedding or at least as a military expediency—an operation which all too frequently leads to difficulties. It is not unnatural then that there should be some overlapping and misunderstanding in the two fields. Indeed, it could hardly be otherwise.

William Terhune, in a recent address, prophesied that the two sciences would of necessity go through at least four phases of development:

1. There would develop an outer fringe of dissatisfaction relative to existing conditions in the two groups.
2. Each group would undergo an extensive period of exploration in search of factual data and information which must be related to the established facts of the other sciences.
3. There would be a period of intensive selectivity of facts applicable to present purposes.
4. There would be an adaptation of these facts on the basis of those already current and which had become ingrained because they met the needs of the particular science.

All of these processes are obviously going on at the present time and are largely responsible for the conflicts that exist. There can be no question but that the relationship between the physician and the psychologist can never be entirely happy until each has a more complete understanding of the other and until areas of mutual assistance and trust have been developed. There are, it seems to me, certain well defined areas already established in which no conflicts exist or at least in which no conflict should exist; as examples, I might cite vocational counselling and guidance, psychologic testing and personnel work. Areas in which some disagreement does exist concern chiefly those health fields in which the two sciences can, for the most part, play an important role. They include psychotherapy and analysis.

To me it seems clear that the physically and mentally ill are and must remain primarily the responsibility of the physician. It seems equally clear that the physician is derelict in his duties if he does not make available to the patient every method which might hasten his recovery; therefore, the psychologist with all that he has to offer must act as a consultant whenever indicated. The phychologist and the physician must form a smoothly functioning team based on mutual respect and admiration.

It has been well said that dissention and strife, agreement and mutual respect do not take place between sciences but between people. It is essential then, that we get together and establish a basic understanding based on the mutual respect which springs from the recognition of the other's capabilities and seriousness of purpose.

To the physician the "Principles of Medical Ethics" represents a guide to professional conduct that cannot be violated or ignored. The "Principles of Medical Ethics" are not, of course, static but change with changing conditions. They have been revised many times since first propounded by Thomas Percival in 1778 and I am sure they will continue to be revised to meet changing conditions. These rules of conduct and procedure are frequently more effective than laws and I would urge the clinical psychologists to bind themselves to similar rules of ethics and conduct. Professor Conant has gone even further and has suggested that all those who professionally qualify for work in the natural sciences take the Hippocratic Oath.

I would urge a close liaison between psychologist and psychiatrist on not only the national but state and local levels. As a psychologist, one should have the understanding necessary to accept and overcome rebuffs from whatever source. They, of all people, should understand the fear, the possessiveness, the doubts, that must assail all. To secure a satisfactory and sound rapport with other scientific disciplines is perhaps their greatest challenge. I feel that the psychologist cannot fail if his science has reached that degree of maturity which brings confidence to its adherents. Many of the present day problems are matters of public relations between ourselves as individuals in a group as well as between other groups. We need to tidy up our own houses and then sell ourselves to others.

The establishment of qualifying boards is almost always a helpful step. Clarification of requirements necessary to perform adequately in the various fields is another. The establishment of strong, persuasive, understanding societies and associations is a third. I am inclined to believe that legal procedure is the least satisfactory method of elevating professional standards and

Presented before the Missouri Association of Psychologists, November 1, 1952, St. Louis.

should be entered into only after the most careful study and consideration. Licensure may bring on more problems than it solves. These problems, however, are not within my province and perhaps should not be mentioned in a discussion of this sort.

I would conclude by emphasizing the obvious; namely, that clinical psychology is undoubtedly a necessary and important part of modern medicine. Many physicians are aware of this and welcome the psychologist as a consultant and colleague. There are, however, few physicians who do not feel that a physician and only a physician is equipped by training to diagnose and treat the sick. It it imperative, therefore, that relationships between physicians and psychologists be clarified and solidified so that they can work in harmony for the benefit of the patient. This can be accomplished through the mutual understanding that comes with close association and personal contacts.

I would suggest that the psychologist publish more freely in the medical journals, particularly those which reach a broad segment of the medical profession as an aid to the formation of the inevitable link in the chain which must be forged to join the two elements psychology and psychiatry together.

4161 Lindell Blvd.

Readers' Review

Postpartum Hemorrhage:

Children's Bureau reports 20 per cent of maternity cases mention postpartum hemorrhage, and 40 per cent of all maternal deaths are due to postpartum hemorrhage; modifications of usual use of oxytocics to control postpartum bleeding is advocated. Normal physiology of uterus is discussed, the contraction and retraction of uterine muscles described. Eliminating retained placental tissue and injuries to birth canal, most postpartum bleeding due to atonic uterus with relaxation of muscle fibers. Usual single dose of posterior pituitary extract and ergot may give a false sense of security, effects last only about 20 to 30 minutes, and 1 to 1½ hours respectively. Relaxation then may be unobserved until severe hemorrhage has occurred. In those with atonic type of uterus immediately after delivery, and those prone to have an atonic uterus, due to polyhydramnios, multiple births, prolonged labor, give alternate doses of posterior pituitary extract (Pitocin) 5 mm. subcutaneously and Ergotrate, 0.5 cc. intramuscularly or intravenously every one half hour for 4 to 6 hours. Alternate method: Give 1 to 2 cc. posterior pituitary extract (Pitocin) in 1000 cc. 5 per cent glucose in distilled water intravenously. Daro, et al. *Am. J. Obst. & Gynec.*, November, 1952.

Both of these methods have given excellent results in treating or as prevention of postpartum hemorrhage in our hands. E. E. Wadlow, M.D., Obstetrics, *St. Joseph.*

HOW MUCH IS "SOME" GOVERNMENT?

REV. JOHN C. FRIEDL, S.J.
KANSAS CITY

THE KNOTTY PROBLEM of government in the field of health is current again since the December report of the President's special health commission. What are we to think? What are we to say? What is the philosophy of intervention in general? What is its application in the field of health?

No matter how one talks or writes most people in the United States definitely do believe in "some" government intervention in their affairs. There are only two other attitudes possible: "all" government; "no" government. And both of these are quite totalitarian, each in its own way. The first is authoritarian and fascist, while the second is either anarchist or full blown Marxian socialist (if and when the Marxians ever attain their classless society).

By democratic constitutional principle we are for two types of government intervention in our affairs. The first is wholly unilateral, that is, a sort of policeman intervention. We recognize the duty of the supreme political power "to establish justice and insure domestic tranquillity." The second type of intervention is multilateral. This means that it is a shared type of intervention, enshrined in those carefully chosen words of the Preamble to our Constitution, "to promote (not establish) the general welfare."

Of itself, the mere fact of government intervention does not and cannot warrant the easy epithet "socialistic." But somewhere on the scale between the two extremes of "no" government and "total" government there must lie a danger point where federal intervention comes perilously close to undemocratic paternalism, and a further point where the mitigated socialism of the welfare state begins. At this point the supreme political authority intervenes relentlessly in the social and economic lives of its citizens by means of corrective legislation of all kinds. In a democracy this process can begin innocently enough through the legislative initiative of the people themselves or through their representatives asking government to supply by law for the moral inertia or intellectual apathy of the body politic. The omnicompetent state in a republican form of government can develop out of too great concern for mere security as against the economic guarantee of liberty, provision for which is a legitimate function of political authority.

Normally, people's needs should be met through social and economic organizations and occupational groups which stand between them and the state. Society consists of a complicated network of such organizations in which nonpublic social units should predominate. The welfare state develops when the central political authority too readily

Director, Institute of Social Order, Rockhurst College, Kansas City.

replaces these institutional groups with governmental agencies.

On the other hand, while alert to the possibility of abuse, we should not lay ourselves open to another un-American attitude which to date has actually had more practical influence on government and on our economic system than the threat of state omnipotence. All too prevalent is the notion that government in a democracy is not supposed to govern, constructively, that is, for the common good. For all too long there have been those who would relegate government to the role of mere policeman, keeping order, enforcing contracts, collecting taxes and, in the main, making itself as inconspicuous as possible in the affairs of its citizens.

In our anxiety to prevent an unholy massing of administrative power within governmental agencies, we dare not repudiate the clear insight of Abraham Lincoln who maintained that "the legitimate object of government is to do for the people what needs to be done, but which they cannot by individual effort do at all or do so well for themselves." A true function of civil authority is the subsidiary function implied in its duty to promote the general welfare.

This principle of subsidiarity is a fundamental principle of democratic social theory and is applicable to all moral organisms, institutional groups and juridic personalities, from the highest to the lowest in the political regime or in the socio-economic system. That is the social theory discernible in the pertinent pronouncements of all modern Popes from Leo XIII to Pius XII. Government, for instance, should not try to repair social ills by indiscriminate patchwork, but should allow the whole national life to express itself in such ways as will, of themselves, produce orderly social and economic conditions. The proper function of the state, therefore, is to protect, encourage and direct the operations of nongovernmental agencies, in education, health, business, agriculture and social welfare generally. The state should never take upon itself a task that can be performed as efficiently by a lower body or by a private person. When the state does intervene the criterion which governs the propriety of its intervention here and now appears to be this: Is the activity in question in conformity with the common good? If not, and if civil authority can reasonably bring about a situation of greater social justice, it seems the proper role of government to intervene in any specific instance. This intervention will be valid until the lesser private or nonpublic agency, association, occupational group, has purged itself of its viciousness, lethargy, apathy, incompetence, inability or unwillingness to take the initiative.

Pius XI in his "Reconstructing the Social Order" insists that political authority should not undertake to do what can be done quite efficiently by smaller autonomous and semi-autonomous bodies. This does not mean that it may not supervise their operations and, if necessary, assist or restrain them in the interests of the good of the community. The primary duty of the state is, therefore, to secure social harmony by insisting vigorously on the observance of the moral law, and by making every effort to insure that the legal system and the social organization be such as to realize public and private welfare. These duties are, therefore, twofold in character: negative and positive (constructive). The first is the unilateral duty to protect the rights of its citizens (police power), while the second is the multilateral duty to promote by positive means whatever is for the common good whenever and wherever private or nonpublic endeavors are unequal to the task or are palpably derelict in recognizing responsibility.

Because the state has duties and, like any individual, is bound by the moral law, it also has rights, the right particularly to direct its citizens to the attainment of the common welfare in keeping with the preservation of the dignity of the individual. In general, then, the federal government should encourage individuals and nongovernmental organizations to carry on all the activities in those fields that they are willing to assume. Government should only step in to carry out responsibilities that autonomous groups cannot or will not undertake.

All this is summed up in a few sentences of an address of Pius XII to the Congress on Administrative Service, meeting in Rome in 1950. "What is the true notion of the state if not that of a moral organism based on the moral order of the world? It is not an almighty power oppressing every lawful exercise of free initiative. Its function, its magnificent function, is rather to favor, help, promote a real coalition, an active cooperation in the sense of a higher unity of members who, while respecting their subordination to the object of the State, provide in the best way possible for the good of the whole community precisely in so far as they preserve and develop the character which is particular and natural to them."

How much, then, is "some" government without having too much government? It would appear that the planning and organizing of any kind of joint venture between government and some occupational group will be safely democratic if it is largely directed and shared by the participants, and if it excludes sole control by political authority or control in undue measure. Nowhere can this be more clearly demonstrated than in the field of the total health of the nation.

No problem currently challenges the best thinking and performance of the healing profession more than this one. Like it or not, doctors, hospital administrators, nurses, medical schools and representatives of commercial or nonprofit medical and surgical care plans are in the public eye as never before. These are the people who constitute the healing profession. It is an occupational group. Nothing it would like better than to continue on with its old time professional reserve and unobtrusiveness, its reticence and its reluctance to pre-

sent itself for public scrutiny and approval. Not that it has anything of real importance to hide or to be ashamed of; it just "wants to be let alone" to pursue its tasks as in the good old days. But times have changed. With the increasing complexity of our society there have come social, economic, political and institutional changes—and welfare problems. Other occupational groups had to meet these changes, and are presently facing up to the ensuing problems. They are beginning to realize that these changes require intelligent adjustment of men and organizations to life's changing patterns. The medical world can be no exception. It is one of the pieces to be fitted into the jig-saw puzzle of our mass production economy and of our American democracy.

Over the years this healing profession has been taking on the stature of a juridic institutional personality. As a personalized community resource it is rightfully insisting on its semi-autonomy and its right to preserve its identity and its "privileged" character. Only a juridic personality can speak of a right. But if it speaks of rights then it must also speak of duties and responsibilities. As John Maurice Clark, speaking of another occupational group but with equal applicability to the healing profession, puts it in his "Alternative to Serfdom":

"Those who have new rights to conquer (or are rediscovering old ones) cannot easily visualize the duties that go with them, or even the fact that new rights carry new duties or are forfeit otherwise. Still harder to realize are the dangers of power without adequate social purpose. When all these requirements have been measurably met, we can claim to be an economic community."

The modern economy is based upon division of labor and diversification of functions, interlocking and interdependent. The healing profession now exists in an industrial society. And so, as never before, the medical world finds itself being discussed pro and con by all kinds of people. Like any other occupational group it has the right to retain its semi-autonomy so long as it demonstrates its competence to promote the public welfare by intelligent collective cooperation of all its constituent forces, powers, functions and resources. Validation of that right requires a highly developed sense of corporate responsibility, self imposed and self regulated .

Intelligent laymen, seeking to make up their minds on the whole subject of welfare in general and of health welfare in particular, simply recognize that there is already "some" government in the field of health. And none but the most prejudiced would deny that its vast network of hospitals and research is doing a pretty good job of it. That is the catch. If it is already doing so well, it is quite understandable that the unwary would ask the simple question: Why not more of it?

The answer to that question is the business of every member of the healing profession. If it is good it is only because voluntary and semipublic nonprofit efforts are keeping and will keep it good. It is the voluntary institution which is the spur to governmental and public effort. Lacking this healthy competition of voluntary groups our government healing agencies would lag and degenerate. If this governmental participation in the total health of the national community is to be kept good—it will be only as voluntary agencies themselves are kept good by their own members. These will not be kept good unless each member of the healing profession develops a high sense of social consciousness—the only spark, the only impulse to community progress. The day when this social consciousness dies or fails of sturdy development in occupational groups for lack of expression, for lack of exercise, it will be noticeable even in the corresponding government agency, which presently is doing a creditable job. Without vigorous outside challenge by semi-autonomous experiments in group health care similar to Blue Shield pre-paid medical and surgical plans, any similar activity by government alone would become mechanical, statistical and without soul or inspiration.

BOOK REVIEWS

BONE TUMORS by Louis Lichtenstein, M.D. C. V. Mosby Co., St. Louis. 1952. Price $10.50.

Emphasis is this concisely written monograph on bone tumors is placed upon arriving at a definitive diagnosis of a bone lesion before therapy is instituted. It is urged that a presumptive diagnosis of a bone lesion entails the evaluation of the clinical aspects of the case as well as the roentgen findings, but a definite diagnosis should not be made nor should therapy be begun until biopsy material has been obtained and a histologic diagnosis established.

By adopting this approach to each group of tumors and by utilizing 155 excellent photographs of roentgenograms and of the gross and microscopic pathology of the various tumors, the author has achieved a compact, valuable handbook on bone tumors for which orthopedists, radiologists and pathologists may well be grateful.

Wherever laboratory findings are of diagnostic value, they are included in the discussion, and an appendix is devoted to the brief description of some of the non-neoplastic bone lesions which must be differentiated from true tumor neoplasms. L. E. S.

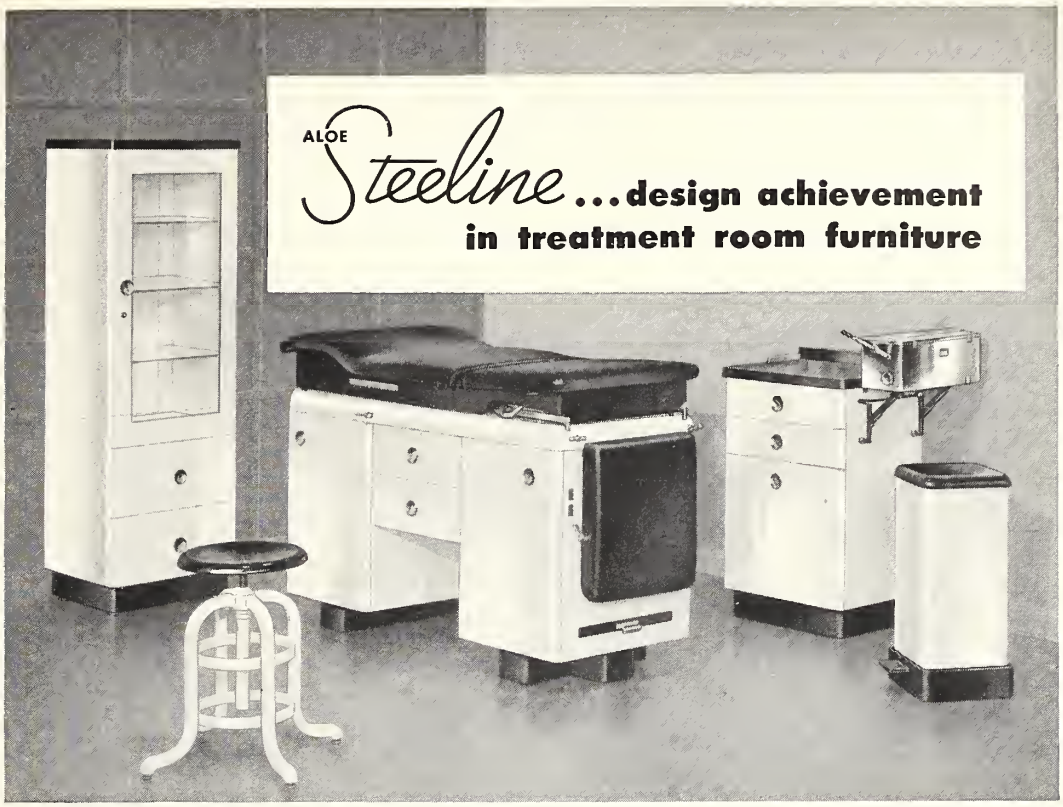
CURRENT THERAPY 1952. Latest approved methods of treatment for the practicing physician. Edited by Howard F. Conn, M.D. W. B. Saunders Co., Philadelphia and London. Price $11.00.

The first edition of "Current Therapy" came out in 1949, and each year has brought a new, revised and enlarged volume. This latest 1952 edition has increased by about 100 pages and 189 new contributors. The format of the book is unchanged and the excellence of the preceding volumes is maintained.

Each contribution is fairly short, and, while occasional suggestions may be of dubious merit, they are current.

Every practitioner would do well to have a recent copy of this fine reference work easily available.

B. S. P.



New exclusive features, advanced styling, long term economy

New steeline design embodies the practical suggestions of scores of practitioners and specialists throughout the nation. Note these features: The new table top has floating body support; formed by foam rubber cushion over a shaped foundation—real comfort for the patient. Convenient drawer under head end holds paper sheeting roll, or blood-pressure instrument, etc. Retractable heel stirrups; adapter for Bierhoff crutches also available. Built-in, rectractable stainless steel intravenous arm rest also provides convenient shelf for blood-pressure instrument, supplies, etc. Electrical outlet conveniently located at end of table. Cabinets feature magnetic door latches, crystal glass shelves and glass door panels set in rubber. Suction-pressure unit is available for all cabinets. Bottoms of drawers are cork-lined. Tops of all treatment cabinets are of Textolite, acid-proof, easy to clean plastic surfacing material. Illustration shows standard five-piece group.

FREE 4-COLOR BROCHURE SEND FOR YOUR COPY TODAY

A. S. ALOE COMPANY
Send your Free 4-color brochure with information regarding New Steeline Treatment Room Furniture.

NAME_____

STREET_____

CITY_____ STATE_____

a. s. aloe company
AND SUBSIDIARIES
1831 Olive Street — St. Louis 3, Missouri
LOS ANGELES 15, California, *1150 S. Flower St.*
SAN FRANCISCO 5, California, *500 Howard St.*
MINNEAPOLIS 4, Minnesota, *927 Portland Ave.*
NEW ORLEANS 12, Louisiana, *1425 Tulane Ave.*
KANSAS CITY 2, Missouri, *4128 Broadway*
ATLANTA 3, Georgia, *492 Peachtree St., N. E.*
WASHINGTON 5, D.C., *1501 Fourteenth St., N. W.*

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

You Can Help

There are several ways our readers can help make ours a more complete journal. Perhaps some few will say, "It's none of my business, I never read it anyway." However, most members of our Association probably would assist if it didn't require too much effort, hence this reminder.

Everyone reads the newspapers; many even get past the comics and sports pages, while some feel they don't need to read the "ivory tower" publications. In these same newspapers are editorials and news articles concerning physicians, health and medical matters—cut them out and send them in!!

Similarly, Doctor So-and-So is elected President of the Chamber of Commerce, the Rotary Club, or perhaps his fellow-citizens have made him Mayor—send these items in. Maybe he addressed a medical society meeting or opened with a prayer at a state-wide religious organization gathering (very rare), or hit a gusher in the oil field (more rare)—send it in.

Remember, what is NOT news in your community, IS news elsewhere in the State. Some members actually have told us that membership news to them is the Journal's main attraction. If one area sends in all the news, and your section doesn't, don't gripe, just send in the news!

No one has to be a Ph.D. or a professor to get his stuff published. An unusually interesting short case report (minimal effort); a brief résumé of a red hot scientific article, with an equally brief personal comment (little effort); a review of the literature, smoothly summarized as a Postgraduate Review (much more effort); a full length scientific article (considerable effort); any and all of these we welcome. Send them in.

And, while we're on the subject, do you ever take your Journal to the little woman at home? Maybe she would like to look it over. Wouldn't it be read more thoroughly if sent to your home? A woman's insight often is extraordinarily penetrating, even in fields not strictly her own. Besides, we are trying to stimulate Auxiliary reader interest with an item each month from their President. Take your copy home.

These are some of the several ways you can help us in constantly improving Missouri Medicine.

VINCENT T. WILLIAMS, M.D.

From Within (III)

In our last two items "From Within" we traced the reforms leading to uniform educational requirements for the practice of medicine and then to the standardization of medical schools resulting in our having only Grade A medical schools. It was noted that the desire for these reforms originated from within our own ranks—and that the reforms themselves were brought about by our own efforts.

The next major step was the standardization of hospitals—a very important move which brought in its wake rules for the proper selection, organization and functioning of the hospital staff.

There was also a model plan for nursing organization and administration—and rigid requirements were set up as to laboratory facilities and personnel. By requiring written histories and physical examinations within a certain time after admission the average number of days of hospitalization was cut down. By requiring a written history and examination and diagnosis before operation, unnecessary operations were avoided and, further, a well functioning laboratory brought to light any tendencies toward unnecessary operations.

Improvements were made in the selection and training of interns and residents—a very important change for the good. The outstanding thing about this whole program is that the recognition of the need for it, the desire for it, and the efforts that resulted in its fruition came entirely from within our ranks. This is something to keep in mind during these turbulent days of clamor by politicians for socialized medicine.

F. T. H'DOUBLER, M.D.

"Help Wanted. Good Working Conditions."

How would you like to begin receiving a pay check on the day you begin the study of medicine? Also, after graduation, a position of respect and high esteem in the community, with a good apartment in which to live, with servants and a private automobile and chauffeur on the side? Not enough, you say? OK—we have as an added inducement a work day only six hours long, with one day off in every five. There's a job that is a job, men. And it's to be had for the asking, if you can sell yourself as a loyal Communist to the Personnel Department in the Kremlin.

According to Eddy Gilmore, AP correspondent in Moscow, doctors rate well in the U.S.S.R. In a recent dispatch, Gilmore presents this plush picture of the medical merry-go-round behind the Iron Curtain. There are a few things that Eddy couldn't transmit in his article, however, censorship being what it is in the AP's Moscow office. Let's read between the lines.

Eddy couldn't say, for example, that if one happened to bear a mark of Jewish ancestry, the Commissar in charge of Medical Liquidation could bring the gravy train to an abrupt halt. Nor could he emphasize the discomfort of living in a goldfish bowl, attempting to suppress the furtive glance over the shoulder to see whether the shadow of the State was watching every move. Nor could he mention the paralyzing fear that perhaps one's efforts to restore a party bigwig to health might be unsuccessful. Nor could he say that the struggle for success, on one's very own, in free and open competition with free men, was a way of life that transcended all others. No, Eddy couldn't say it—but we can, and we do, thanking God with every free breath that we draw.

JEROME I. SIMON, M.D.

Inguinal Herniae

None of us desire to become embroiled in the current controversy regarding the relative merits of the various technics for the repair of inguinal herniae. Because of the fact that the intra-abdominal approach advocated by LaRoque (*Surgery, Gynecology and Obstetrics* **29**:507, 1919; *Annals of Surgery* **75**:110, 1922; *Annals of Surgery* **79**:375, 1924) apparently is so little known and its occasional advantage in complicated herniae cases is so great, it seems worth while to note particularly the publications regarding his technic.

The tendency by most of us to use a standardized technic, regardless of the anatomy presented, or whether a simple or complicated hernia exists, has undoubtedly caused much unnecessary difficulty for the surgeon and probably has contributed to recurrence in some cases. Actually, the intra-abdominal approach does not necessarily dictate the actual repair of the defect presented, but it does facilitate repair in difficult cases.

Williams (*Annals of Surgery* **126**:612, 1947) has pointed out the advantages of the LaRoque principle in the repair of the "sliding" hernia. Its superiority in the hernia with intra-abdominal pathology, which cannot be reached adequately through a conventional hernia incision, is obvious. Its use in certain strangulated and recurrent hernias, containing bowel, greatly facilitates the repair and minimizes the trauma incident to such repair.

LaRoque and Jacobson (*American Journal of Surgery* **71**:797, 1946 and *American Journal of Surgery* **79**:557, 1950) have used it as a standard routine approach for the primary repair of inguinal and femoral herniae. LaRoque reported on 1,700 cases, and Jacobson used it in 400 cases; all repaired following the LaRoque technic.

We feel that the basic principles enunciated by LaRoque should be familiar to every surgeon who does hernia repair; we have found it most invaluable in selected cases.

AVERY P. ROWLETTE, M.D.

Dates to Remember

April 26 through 29, the Missouri State Medical Association will hold its 95th Annual Session in Kansas City, the scientific sessions, the House of Delegates and the scientific and technical exhibits to be housed in the Municipal Auditorium. Eleven outstanding physicians from out of Missouri and twenty-eight Missouri physicians will appear on the scientific program, which is printed in full in this issue and covers a wide scope in medical interests.

Round table luncheons on Monday and Tuesday will continue the scientific instruction and give those in attendance opportunity to ask questions of the essayists. These will be held at the President Hotel.

Mr. Allan B. Kline, Chicago, President of the American Farm Bureau Federation, will be the guest speaker at the Annual Banquet in Honor of Past Presidents, which will be held Tuesday evening at the President Hotel. J. W. Thompson, M.D., St. Louis, will preside at the banquet, and E. Claude Bohrer, M.D., West Plains, will be installed as President of the Association.

It is urged that the dates of the Annual Session not only be remembered but that reservations for these days be made in Kansas City and that each member be present and participate in the Annual Session of the Association.

Fraternally Yours

From Our Notebook

At our neighborhood coffee-shop the other morning we went up front to pay the cashier. The change returned wasn't much, but we remember distinctly a half-dollar, plus some chicken-feed. Almost to the door, our eye was attracted by one of those little donation-receptacle gimmicks. On it was a picture of a little kid using crutches, smiling out wistfully, hopefully, expectantly. "Must be March of Dimes," we mused. And so we did the natural thing—dunked around six bits into the kitty.

Thought no more about it until a double-take look identified the heart appealing recipient of this cash: Cleveland Chiropractic College Alumni Association.

As Jack Benny would say, "well, Well, WELL!!!"

Sad, but true, how soon we are forgotten. A few years ago, in the military medical set-up, he was a lion with a retinue of sycophants stretching from here way out to there. Yet, at the last American College of Surgeons Meeting in New York he looked like he would be glad to talk to anybody, even to the elevator boys in their brass-buttoned uniforms. No longer the pomp and the power, the hustle and the bustle, the throne and the throng.

In the span of less than ten years, reduced from one of the most powerful medical men in the United States, to a lonely old man with nothing but memories to rattle around in his calvarium. Just a-hungering for a mere wisp of genuine friendship, not tinctured with apple-polishing. To watch him eagerly grasp the hands (there were a few who remembered) of former subordinate medical officers, was almost pathetic, pitiable; the prima donna now trying to recapture, relive, past glories from a balcony seat.

While discussing doctors at get-togethers, why is it the *restaurateurs* always say, "A bunch of doctors, huh?—well, you better double that liquor order!"

See where they're moving ex-President Harry Truman's stuff to the Jackson County Court House. We don't suppose any of our readers would be interested in blowing off the front door, but if they are, watch out for the Police Department just across 12th Street. Also, the Sheriff's Office is upstairs; just a friendly tip.

However, as has been said of another situation, anyone "casing the joint" might reason, "Well, one of our boys made it!"

We have our troubles, too. The following Western Union was received after the January copy of the JOURNAL was sent out:

"Dr. Vincent T. Williams—

"Argyle Bldg KSC—

"Regarding January Journal your surgical enthusiasm overwhelmed your editorial zeal with my article. Circumcision yes but emasculation never—

"Bob Lamar"

The best we could figure out, in consolation, was the following:

"Dr. Robert Lamar—

"Professional Bldg KSC—

"Held consultation. Decided to pitch after-birth and keep baby. It looks fine.

"Ted Williams"

Hear some talk of too many meetings, probably with a scintilla of truth. But there is one meeting no member of our Association should miss, the Annual State Association Meeting, in April.

The program committee has worked hard and long in an effort to pack this program with top drawer medical celebrities, together with a number of outstanding fellow members. All this for our mutual benefit.

A big medical meeting depends on several factors for its success. It must have a sprinkling of medical big-wigs to attract attention. There must be a selection of topics which will hit all phases of medicine. And for a real, first class show, there must be a large, attentive audience. No matter how gifted a speaker is, a standing-room-only, capacity crowd spurs him on to better effort.

If you have not already done so, make arrangements now to attend an annual meeting which promises to be one of the best we have had in many years.

It is difficult for busy physicians to leave their practices. But ordinarily a fellow can "slip away a few days," if he but wills to do it. And, despite impending obstetrics cases and other similar professional obligations, usually some way can be worked out if he sincerely wants to make it.

Naturally, most physicians want to bring their wives. There are always social and entertainment items for the ladies. Moreover, few of the women get home without doing a little shopping. Perhaps a new little bonnet or some trinket (at least they look like it) which gives added impact to the "Ouch" from the aching pocket book.

Honestly, we feel these events do give a lift both to the physician and his better-half. We urge all those who possibly can make it, to attend our Annual Meeting, starting April 25, in Kansas City.

We'll be seeing you then and there!

V. T. W.

Missouri Medical Meetings

March 19-21: Tri-State X-Ray Technicians, Hotel President, Kansas City.

March 23-26: American Academy of General Practice, Kiel Auditorium, St. Louis.

March 28-29: Mid-Continent Psychiatric Association, Hotel President, Kansas City.

March 30-April 1: International College of Surgeons, Regional Conference, Statler Hotel, St. Louis.

April 1-4: American Association of Pathologists and Bacteriologists, St. Louis.

April 6-8: Missouri State Nurses Association, Statler Hotel, St. Louis.

April 15-17: Midwest Hospital Association, Municipal Auditorium, Kansas City.

April 19-22: American Radium Society, Chase Hotel, St. Louis.

April 24-25: Missouri Tuberculosis Association, Hotel President, Kansas City.

April 26-29: Missouri State Medical Association Annual Meeting, Municipal Auditorium, Kansas City.

May 4-6: Missouri Public Health Association, Hotel Governor, Jefferson City.

May 11-14: American Urological Association, Jefferson Hotel, St. Louis.

May 25-28: Catholic Hospital Association, Municipal Auditorium, Kansas City.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.

Barton-Dade County Medical Society—third Wednesday of each month.

Benton County Medical Society—meets only on call.

Boone County Medical Society—first Tuesday of each month.

Buchanan County Medical Society—first Wednesday of each month.

Butler County Medical Society—first Wednesday of each month.

Callaway County Medical Society—third Thursday of each month.

Cape Girardeau County Medical Society—first Monday of each month.

Cass County Medical Society—meets quarterly on third Thursday of month.

Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.

Clay County Medical Society—last Tuesday of each month.

Clinton County Medical Society—meets only on call.

Cole County Medical Society—first Monday of each month.

Cooper County Medical Society—first Monday after the 15th of each month.

Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.

Dunklin County Medical Society—first Tuesday of each month.

Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.

Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.

Greene County Medical Society—fourth Friday of each month.

Henry County Medical Society—meets only on call.

Holt County Medical Society—meets only on call.

Howard County Medical Society—meets only on call.

Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.

Jasper County Medical Society—second Tuesday of each month, September through May.

Jefferson County Medical Society—meets only on call.

Johnson County Medical Society—meets only on call.

Laciede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.

Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.

Lewis-Clark-Scotland County Medical Society—meets only on call.

Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.

Miller County Medical Society—meets only on call.

Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.

Moniteau County Medical Society—second Thursday of each month.

Newton County Medical Society—meets only on call.

Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.

North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.

Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.

Pemiscot County Medical Society—third Thursday of each month.

Perry County Medical Society—second Thursday of each month.

Pettis County Medical Society—third Monday each month September through May.

Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.

Pike County Medical Society—third Tuesday of each month.

Platte County Medical Society—meets only on call.

St. Charles County Medical Society—third Thursday of each month.

St. Louis County Medical Society—second and fourth Wednesday of each month.

St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.

Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.

South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.

Vernon-Cedar County Medical Society—meets only on call.

Webster County Medical Society—meets only on call.

Musings of the Field Secretary

Apparently medicine holds to the tenet that voluntary cooperation is the key to health progress. Why then are many physicians apathetic to the idea of community health councils? Maybe at this point the question needs be asked "What is a health council?" Simply stated, it is a voluntary community-wide organization which brings into one agency all local elements willing and able to contribute to better health planning. A health council is not a service agency but is a coordinating and planning body. It has an interest in all community health projects with no devotion to any particular phase of a health program. It can well serve as an outlet for both lay and professional information.

The objective of a health council, therefore, is to effectively mobilize all of the health resources of a community in a manner which will meet best the health needs of that community. The two words most expressive of health council are "cooperation" and "voluntary."

Granted that theoretically the health council appears to be a sound vehicle through which a community may help solve its own health problems, there is sufficient evidence available to show that without enlightened, virile leadership the health council does not get out of the barn. It is recognized that the support of the medical profession of any community health program is essential to its success.

A health council also needs the active cooperation and guidance of the local medical profession else it may sometimes unwittingly embark upon projects, or make decisions, not to the best interest of the health of the community.

Members in the News

Herbert A. Hamel, M.D., Kansas City, attended the American Academy of Orthopedic Surgeons meeting in Chicago January 25 through 29.

The Kansas City Citizens Regional Planning Council for 1953 has appointed **Paul N. Johnstone, M.D.**, as chairman in charge of planning for increased hospital facilities.

E. F. Hoctor, M.D., Farmington, addressed the Farmington Business and Professional Women's Club on January 19.

In recognition of more than thirty years of practice on the staff of the St. Francis Hospital, Cape Girardeau, **A. L. Fuerth, M.D.**, was presented a gold watch on January 14 by the hospital and staff.

Ralph A. Kinsella, M.D., St. Louis delivered the main address at the conferring of degrees to 211 graduates of St. Louis University on February 1.

J. A. Brennan, M.D., Farmington, addressed the regular monthly dinner meeting of the Methodist Men's organization of the Memorial Methodist Church on January 19 and spoke on "Child Deviations From Normal."

Robert E. Bruner, M.D., St. Louis, made a survey of the cerebral palsy facilities in Charlotte, North Carolina, at the request of the Charlotte Social Planning Council from January 19 to 21.

The *Springfield Leader and Press* reports: "Highlight of the winter social season is always that annual shindig staged by the Greene County Medical Society at the Country Club. Last Monday's affair was no exception, enlivened considerably by the sleight of hand tricks indulged in by (Drs.) John Ferguson and Harold Lurie."

Burge Hospital polio unit and **Danile L. Yancey, M.D.**, were given a nice write-up in the *Springfield Leader and Press* regarding the outstanding work in the recent polio epidemic. Dr. Yancey was cited as outstanding by the Burge Hospital Administrator.

John P. Ferguson, M.D., Springfield, attended the Havana, Cuba, meeting of the South Atlantic Association of Obstetricians and Gynecologists.

Gordon P. Barnett, M.D., Kansas City, was the guest speaker at a meeting of the Kansas City Underwriters Association on January 8 and spoke on "Electrocardiographs and Electrocardiograms."

Lawrence W. Hart, M.D., Kansas City, has been appointed medical director of the Children's Mercy Hospital.

J. H. Summers, M.D., Lebanon, and Mrs. Summers, took a Caribbean cruise following the Southern Medical Association, going to Jamaica, Curacoa, Venezuela and Trinidad.

The spring meeting of the St. Joseph Clinical Society will be held April 9 at the Crystal Room, Hotel Robidoux, St. Joseph. The meeting is designed especially for the general practitioner and is open to all ethical physicians. There is no registration fee. The meeting begins with a noon luncheon and continues through an evening program.

Edwin F. Gildea, M.D., St. Louis, was the speaker at the Jackson County Health Forum on January 21 and spoke on "Nervous Exhaustion and Fatigue."

Leo H. Pollock, M.D., Kansas City, discussed "Medicine and the Bible" at a dinner meeting of the Episcopal Business Women's Guild on January 13.

J. C. Creeck, M.D., Troy, spoke before a meeting of the Business and Professional Women's Club of Troy on January 2. He spoke on "Cancer, Its Recognition and Treatment."

E. Kip Robinson, M.D., C. Edgar Virden, M.D., and **David S. Dann, M.D.**, Kansas City, were elected medical directors of the Kansas City and Jackson County chapter of the American Cancer Society at a meeting on January 12. **Everett D. Sugarbaker, M.D.**, Jefferson City, addressed the meeting.

John J. Modlin, M.D., Columbia, formerly surgeon at the Ellis Fischel State Cancer Hospital, has been appointed to direct the course offering, "Minor Surgery" at the University of Missouri School of Medicine for the Winter semester, 1952-53.

Horace E. Thomas, M.D., Columbia, Clinical Associate in Surgery, has been appointed to give the course, "First Aid" to students in the School of Medicine, University of Missouri, for the Winter semester of the school year 1952-53.

Henry V. Guhleman, M.D., Jefferson City, is serving part time as Instructor in Psychiatry at the University of Missouri School of Medicine, and is responsible for courses in "Psychiatry" in the Fall and Winter semesters of the school year 1952-53.

Roscoe L. Pullen, M.D., dean of the Graduate Faculty School of Medicine, University of Texas, formerly of Tulane University, Charity Hospital in New Orleans, and King's Hospital at Seattle, Washington, was elected on January 9 to become Dean of the University of Missouri expanding four year School of Medicine, Professor of Medicine, Director of the University Hospitals, and Director and Consultant of the Missouri State Crippled Children's Service.

On January 9 the Board of Curators of the University of Missouri awarded a contract to the John Epple Construction Company of Columbia for excavation and placing of footings for the new University of Missouri Hospital.

Claude K. Leeper, M.D., who completed his term of service in the United States Army in the field of Laboratory Medicine, returned to his Alma Mater, the University of Missouri School of Medicine, on January 1, as Assistant Professor of Pathology.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

MILWAUKEE SANITARIUM
WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

Josef A. Kindwall, M.D.
Carroll W. Osgood, M.D.
William T. Kradwell, M.D.
Benjamin A. Ruskin, M.D.
Lewis Danziger, M.D.
Russell C. Morrison, M.D.
Homer V. Capparell, M.D.
LeRoy E. Bostian, M.D.

G. H. Schroeder, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

NEW MEMBERS

Coffey, James L., M.D., Fairfax.
Edwards, Waldo B., M.D., Cedar Hill.
Morris, Clyde D., M.D., Caruthersville.
Scheuber, Charles, M.D., Columbia.
Sweaney, Isaac F., M.D., Oregon.
Weber, Clarence J., M.D., St. Louis.

IN MEMORIAM

Tainter, Frank J., M.D., St. Louis, a graduate of the Hospital College of Medicine, Louisville, 1895; member of the St. Louis Medical Society; aged 80; died January 1.

Skinner, Edward H., M.D., Kansas City, a graduate of St. Louis University School of Medicine, 1904; honor member of the Jackson County Medical Society; aged 72; died January 11.

Flanary, David L., M.D., Phoenix, Arizona, a graduate of the University of Tennessee College of Medicine, 1907; honor member of the St. Louis Medical Society; aged 74; died January 12.

Morse, Frank L., M.D., St. Louis, a graduate of the Beaumont Hospital Medical College, 1900; honor member of the St. Louis Medical Society; aged 77; died January 14.

Edmundson, John Phil, M.D., Kansas City, a graduate of Bennett Medical College, Chicago, 1914; member of the Jackson County Medical Society; aged 61; died January 15.

Bloomer, Gaylord T., M.D., St. Joseph, a graduate of Harvard Medical School, 1920; member of the Buchanan County Medical Society; aged 58; died January 20.

Settle, Charles T., M.D., Rockport, a graduate of the University Medical College of Kansas City, 1901; honor member of the Nodaway-Atchison-Gentry-Worth County Medical Society; aged 73; died January 23.

LEGISLATION

The 1953 session of the legislature is rapidly moving ahead. The Assembly is required to move speedily because of the adoption of a constitutional amendment last November which provides that the Assembly must adjourn *sine die* on May 31 and that the members shall receive an expense allowance, if present on roll call. The expense allowance is in addition to the salary of $125.00 per month.

Committees on Public Health are as follow:

SENATE

A. M. Spradling, Jr., Cape Girardeau, Chairman
John W. Noble, Kennett
Anthony M. Webbe, St. Louis
Frank L. Wilkinson, Kansas City
Edward J. Hogan, Jr. St. Louis
William O. Sawyers, St. Joseph
Michael Kinney, St. Louis
Hartwell G. Crain, St. Louis County
Robert H. Linneman, St. Charles
Noel Cox, Spokane
Charles S. Dickson, Milan
Michael Kinney, St. Louis

HOUSE

Wallace M. Pearson, D.O., Kirksville, Chairman
Mrs. Clara Aiken Speer, Kansas City
Earl S. Cook, Trenton
Ernest W. Baker, Higginsville
Coleman Dodson, Morrisville
Fred R. McMahon, Atchison County
Omar Schnatmeier, St. Charles
Reno A. Warnke, Stover
C. E. Duckett, M.D., Lamar
James McK. Neal, Kansas City
Charles H. Pulis, Mexico
Mrs. Jennie S. Walsh, St. Louis
Charles B. James, Clarkton

T. R. O'BRIEN

MISSOURI STATE MEDICAL ASSOCIATION

The 95th Annual Session of the Missouri State Medical Association will be held in the Municipal Auditorium, Kansas City, April 26, 27, 28 and 29, 1953.

SCIENTIFIC PROGRAM

Monday, April 27, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Motion pictures. Little Theater, Municipal Auditorium.
J. W. Thompson, M.D., St. Louis, presiding.
9:00 a.m. Functional Disorders of the Bowel, Carl R. Ferris, M.D., Kansas City.
9:20 a.m. Discussion: Bruce Kenamore, M.D., St. Louis.
9:30 a.m. Therapy of Heart Failure, T. Reid Jones, M.D., Kansas City.
9:50 a.m. Discussion: Glenn O. Turner, M.D., Springfield.
James W. Allee, M.D., Columbia.
Intermission to View Exhibits.
10:30 a.m. Section on Chest Diseases. Room 500, Municipal Auditorium.
Kenneth Glover, M.D., Mount Vernon, presiding.
10:30 a.m. Newer Chemotherapy of Tuberculosis, Carl Pfuetze, M.D., Chicago.
11:00 a.m. Pulmonary Hemorrhage, Thomas M. Burford, M.D., St. Louis.
11:20 a.m. Discussion: Arthur Adelman, M.D., Kansas City.
11:30 a.m. Bronchiectasis, James L. Mudd, M.D., St. Louis.
11:50 a.m. Discussion: A. J. Steiner, M.D., St. Louis.
10:30 a.m. Section on Obstetrics. Room 600, Municipal Auditorium.
Kenneth B. Cox, M.D., Kansas City, presiding.

the patient-money- and MEDICAL CARE

THE public needs good health care. Yet good health care costs money. Therefore, a way must be found to pay it. These are simple statements, reasonable and logical.

Not so simple is the problem of ***how*** the patient is going to pay for good health care at a price he can afford and in a time of rising costs.

The best answer lies in BLUE CROSS and BLUE SHIELD — that partnership of doctors, hospitals, and the public.

Benefits in terms of service, not dollars, protect against increased charges in many aspects of these community programs.

Non-profit organization cuts operating costs to an almost unbelievable low, thus returning more of the member's dollar than any other type of coverage could possibly do.

Participation and sponsorship of the medical profession build confidence in the minds of the public that their doctors have a strong and aggressive program.

The problem of the patient — money — and the best medical care is met in the teamwork between those who provide that care and those who need it. There are 44 million Americans who say it works!

BLUE CROSS
BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Kansas City
Saint Louis

10:30 a.m. The Management of Eclampsia: A Clinical Evaluation of the Several Therapeutic Schedules, Willis Brown, M.D., Little Rock, Arkansas.
11:00 a.m. The Diagnosis of Pelvic Tumors, William C. Mixson, M.D., Kansas City.
11:20 a.m. Extrauterine Pregnancy, Leo J. Hartnett, M.D., St. Louis.
11:40 a.m. Surgical Complications in Pregnancy, Joseph L. Johnston, M.D., Springfield.
12:00 noon. Round Table Luncheon. Aztec Room, Hotel President.
Ralph R. Coffey, M.D., Kansas City, presiding.
1:30 p.m. Motion pictures. Little Theater, Municipal Auditorium.
Joseph L. Fisher, M.D., St. Joseph, presiding.
2:00 p.m. Management of Chronic Obstruction to the Lymphatic and Venous Channels, Darrell Campbell, M.D., Ann Arbor, Michigan.
2:30 p.m. Emotional Problems of Childhood: Their Management in General Practice, Cotter Hirschberg, M.D., Topeka, Kansas.
3:00 p.m. Responsibilities of the Medical School to the State It Serves, W. Clark Wescoe, M.D., Kansas City, Kansas.
Intermission to View Exhibits.
4:00 p.m. House of Delegates.

Tuesday, April 28, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Motion pictures. Little Theater, Municipal Auditorium.
J. William Fleming, M.D., Moberly, presiding.
9:00 a.m. The Importance of Anesthesia Technics in the Poor Risk Patient, Charles H. White, M.D., Kansas City.
9:20 a.m. Discussion: Russell D. Sheldon, M.D., Kansas City.
Milton H. Noltensmeyer, M.D., Kansas City.
9:30 a.m. Immediate Care of Facial Injuries, Douglas Macomber, M.D., Denver, Colorado.
Intermission to View Exhibits.
10:30 a.m. Section on Metabolic Diseases. Room 500, Municipal Auditorium.
P. T. Bohan, M.D., Kansas City, presiding.
10:30 a.m. Electrolyte and Fluid Balance From a Practical Standpoint, Harry Statland, M.D., Kansas City.
10:50 a.m. Discussion: Mark Dodge, M.D., Kansas City.
Robert Bolinger, M.D., Kansas City, Kansas.
11:00 a.m. Differential Diagnosis of Edemas, Jack Hill, M.D., Kansas City.
11:20 a.m. Discussion: J. Gerard Mudd, M.D., St. Louis.
E. Lee Shrader, M.D., St. Louis.
11:30 a.m. Present Concepts in the Treatment of Hyperthyroidism, Arnold Jackson, M.D., Madison, Wisconsin.
10:30 a.m. Section on Pediatrics. Room 600, Municipal Auditorium.
George V. Herrmann, M.D., Kansas City, presiding.
10:30 a.m. Pediatric Emergencies in the Newborn, Sydney S. Gellis, M.D., Boston, Massachusetts.
11:15 a.m. Pediatric Emergencies in the Older Child, Herbert C. Miller, M.D., Kansas City, Kansas.
12:00 noon. Round Table Luncheon. Aztec Room, Hotel President.
John Growdon, M.D., Kansas City, presiding.
1:30 p.m. Motion pictures. Little Theater, Municipal Auditorium.
Clinton W. Lane, M.D., St. Louis, presiding.
2:00 p.m. Diagnosis in Heart Disease, John Mayer, M.D.; Martin Mueller, M.D.; Bryce Ballard, M.D.; Clark Sealy, M.D.; Blaine Hibbard, M.D., and Edward H. Stratemeier, M.D., Kansas City General Hospital, Kansas City.
Intermission to View Exhibits.
3:30 p.m. Chest Injuries: Diagnosis and Treatment, Ralph A. Dorner, M.D., Des Moines, Iowa.
4:00 p.m. Common Genito-urinary Problems: Their Diagnosis and Treatment. Stoughton White, M.D., Kansas City, Coordinator.
Participants: Irwin S. Brown, M.D., Kansas City.
John F. Patton, M. D., St. Louis.
William F. Melick, M.D., St. Louis.

Wednesday, April 29, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Three Dimensional Slides.
W. A. Broyles, M.D., Bethany, presiding.

Truly
broad-spectrum
therapy in
each tasty
teaspoonful

CRYSTALLINE
Terramycin
BRAND OF OXYTETRACYCLINE, AMPHOTERIC

oral suspension

Pure, well-tolerated Terramycin in pleasant raspberry-flavored vehicle.

Each 5 cc. teaspoonful supplies 250 mg. of truly broad-spectrum antibiotic effective against gram-positive and gram-negative bacteria, including the important coli-aerogenes group, rickettsiae, certain large viruses and protozoan organisms.

Don't miss Pfizer Spectrum appearing regularly in the J.A.M.A.

Pfizer *world's largest producer of antibiotics*

ANTIBIOTIC DIVISION, CHAS. PFIZER & CO., INC., BROOKLYN 6, N. Y.

9:00 a.m. Principles of Geriatric Medicine, William B. Kountz, M.D., St. Louis.
9:20 a.m. Discussion: Charles Wilson, M.D., Cape Girardeau.
W. F. Francka, M.D., Hannibal.
9:30 a.m. Medical Aspects of Thyroid Disease, Charles M. Blackburn, M.D., Rochester, Minnesota.
Intermission to View Exhibits.
M. Pinson Neal, M.D., Columbia, presiding.
10:30 a.m. Uses of the Estrogenic Hormones, Daniel L. Sexton, M.D., St. Louis.
10:50 a.m. Discussion: E. E. Wadlow, M.D., St. Joseph.
11:00 a.m. Panel on Trauma.
Abdominal Injuries, Gene Starkloff, M.D., St. Louis.
Orthopedic Injuries, W. J. Stewart, M.D., Columbia.
Genito-urinary Injuries, James Cope, M.D., Columbia.

PHYSICAL THERAPY ASSOCIATION

A joint meeting of the Eastern and Western Missouri Chapters of the American Physical Therapy Association will be held in Kansas City, Room 503, Municipal Auditorium, April 26 and 27, 1953.

PROGRAM

Sunday, April 26, 1:00 p.m., Municipal Auditorium

1:00 p.m. Registration.
2:00 p.m. Business Meeting.
6:30 p.m. Dinner, Hotel President.

Monday, April 27, 9:00 a.m., Municipal Auditorium

9:00 a.m. Electrical Diagnosis, Donald Rose, M.D., Kansas City, Kansas.
10:15 a.m. Coordination of Rehabilitation Agencies, Mrs. Vivian Shepherd, Kansas City.
11:00 a.m. Arthritis, C. Stewart Gillmor, M.D., Kansas City.
11:45 a.m. Intermission to view exhibits and lunch.
2:00 p.m. Scoliosis, Richard H. Kiene, M.D., Kansas City.
Demonstration: Helen Bradley.
3:15 p.m. Psychosomatics, Louis H. Forman, M.D., Kansas City.
4:00 p.m. Adjournment.

MATERNAL MORTALITY STUDY OF ST. LOUIS

For the last two years a Maternal Welfare Committee of the St. Louis Gynecological Society has been analyzing maternal deaths occurring in the hospitals of Greater St. Louis. This committee is composed of obstetricians, all members of the St. Louis Gynecological Society, and the Health Commissioner of the City of St. Louis. At several of the monthly meetings, physicians who have had a maternal death have attended and participated in the discussion of their case.

The committee analyzed a total of sixty-five maternal deaths in 88,098 total deliveries for the years 1950 through 1952. The table lists the causes of death in these sixty-five cases.

The Maternal Welfare Committee was appointed by the late Dr. T. K. Brown during his term as president of the St. Louis Gynecological Society and is pioneering this work in the State of Missouri. It is hoped that in the near future this committee will work with the Kansas City Gynecological Society in making a survey of the entire state.

Statistics developed from the record of the State Department of Health indicate a great improvement in the maternal mortality rate for Missouri. In spite of a marked increase in the birth rate, maternal deaths in the state have been reduced so that seventy deaths occurring in 1950 represent less than one sixth

CAUSES OF MATERNAL DEATHS

	1950	*1951*	*1952*	*Total*	*Percentage*
Hemorrhage	9	2	3	14	22
Antepartum	2	0	1	3	
Postpartum	5	1	2	8	
Abortion	1	0	0	1	
Ectopic	1	1	0	2	
Toxemia	8	4	3	15	23
Preeclampsia	0	0	0	0	
Eclampsia	3	2	1	6	
Other	5	2	2	9	
Infection	3	0	2	5	8
Puerperal	1	0	0	1	
Abortion	2	0	2	4	
Other	6	8	17	31	47
Embolism	1	5	5	11	
Air	0	1	0	1	
Fat	1	0	0	1	
Amniotic	0	2	0	2	
Other	0	2	5	7	
Anesthesia	1	1	1	3	
Heart Failure	1	1	1	2	
Uremia	0	1	1	2	
Ileus	1	0	1	2	
Irreversible Shock	1	0	0	1	
Brain Tumor	0	1	2	3	
Intracranial Hemorrhage	0	0	1	1	
Pneumonia	0	0	1	1	
Tuberculosis	0	0	2	2	
Diabetes	0	0	1	1	
Unknown	1	0	1	2	
Totals	26	14	25	65	100

of the 435 deaths occurring in 1925. Appendicitis, with eighty deaths, outranked pregnancy in 1950. Whooping cough and measles combined had an equal number of deaths assigned to them in 1950. This lowering of the maternal mortality rate in the state is due, primarily, to better obstetric care of the patient, particularly in the prenatal period, and to the establishment of blood banks in the hospitals.

The committee, in analyzing the maternal deaths, attempts to determine whether or not the death is preventable or nonpreventable; obstetric or nonobstetric. If it is preventable, the committee attempts to find the reason why the preventable death occurred and assigns it accordingly to the doctor, the patient or others.

The reports of the St. Louis committee make it apparent that progress is being made. It is also readily apparent that further reduction of maternal mortality is possible. It is the firm conviction of the members of the St. Louis Committee that an analysis such as they have made during the last two years is one of the first steps to be taken in achieving this further reduction in the loss of life due to child bearing. On a state wide scale, conclusions and recommendations reached through careful and impartial analysis should be welcomed by any physician in whose practice a maternal death has occurred as a means of enabling him to meet a similar situation in the future with greater equanimity and confidence. The St. Louis Committee has, even in the short two years of its existence, been able to secure certain improvements in the field of hospital management of obstetric patients which have resulted in better hospital care for the mothers of the area.

American Academy of General Practice

The American Academy of General Practice will meet at Kiel Auditorium, St. Louis, March 23 to 26.

The program will include a symposium on "Pediatrics," on Monday; symposia on "Eye Problems" and "Industrial Medicine" on Tuesday; symposia on "Thyroid Diseases," "Antibiotics in Surgery," "Diagnosis and Treatment of Lung Tumors," "Water and Electrolyte Balance" and "Pernicious Anemia" on Wednesday, and a symposium on "Cardiology" on Thursday.

The annual banquet will be held Wednesday evening.

G. P. of the Year

John Maston Travis, M.D.

(Exclusive interview)

Your editor was privileged to spend a quiet hour with the "G.P. of the Year" recently in Denver. His better-half was away from the hotel room, being feted by the Auxiliary members. The hotel room was literally bedlam, due to the hundreds of congratulatory telegrams and messages. But the surroundings could not have been more auspicious for our purpose.

Dr. Travis is best described as elfin. He has rosy cheeks and white hair; his step is spritely, his every motion belies his 74 years. And the merry twinkle in his eyes gives one the impression that life for him has always been a challenging, but intoxicating, experience.

He has retained the earthy touch, mellowness and practicality of the old horse-and-buggy doctor, but has developed a fourteen man clinic with a 180 bed hospital. He is the only G.P. in the group, "However, we have other men classed as internists, but they are really just good G.P's."

"They don't think I know much about some of these new things—and the saddest part is, they're right."

"Dr. J.M." was born in deep East Texas, at Canton, and in his early days resolved to take up the fight against "galloping consumption," typhoid fever, and diphtheria and against the other diseases rampant then but virtually wiped out today. He taught school, thus making it financially possible to attend the University of Kentucky Medical School and to complete his education at the Southwestern University in Dallas, in 1907. After seven years of practice at Martin's Mill, he moved to Jacksonville, Texas. Gradually from a frame building (Cherokee Sanitarium) his present institution has been developed. Joining him are a brother and two sons in making this such an outstanding institution.

"I have a brother and two sons who are surgeons, so I hit on them pretty hard; keep my patients out of their hands as long as I can.

"I feel that specialists are over specialized and would be better off if they knew more about general practice. I believe a doctor should take the weather and the diseases just as they come. I would like to stress the importance of getting more G.P's. Although it is impossible for me to conquer all the lines I would like to, the field is so great, and the time is so short, the human mind cannot comprehend all I would like to.

"However, without competent specialists, the G.P. would be very much handicapped; I respect the specialist but, in turn, I expect the same consideration of the G.P."

"I keep in mind one line I want to be well informed on, rather than taking a smattering of everything at one time. And most of my information I get from the *Readers' Digest* type of journal."

His postgraduate studies include Tulane, New Orleans Polyclinic, Polyclinic in New York, Harvard Medical School and Barnes Hospital in St. Louis. Actually, he feels "greatly indebted to these courses" under Hartman and Marriott at Children's in St. Louis.

When asked for a human interest story, he recalled a unique method of assisting labor in his early days. A young Mexican patient, after several hours of desultory effort, was aided by a novel variant of the old "sneeze-her, snuff-her" technic. A long, stout pole was placed tangentially from the corner of the ceiling of the room with the lower end of the pole against the bed. She sat astride the pole and with each uterine contraction made forceful efforts to pull herself up, astride the pole, toward the ceiling—a new method, indeed!

When asked how it felt to receive such a notable honor, he immediately replied with a deprecatory wave of his hand, a shrug of his shoulders and a flourish with his glasses. "They cracked my picture ten times before I could stop them; I was televised, telegraphed and everything but proctoscoped."

We salute John Maston Travis, M.D., truly a great gentleman of a great profession. V.T.W.

Low Forceps

ROBERT LAMAR, M.D.

It becomes increasingly apparent that there is a clique of do-gooders attempting to salvage our waning virtues by promulgating more and more weekly campaigns in which everyone is to cast aside his baser impulses and coyly spurn the other cheek. "Friendship Week," "Love-Your-Neighbor Week," "Brotherhood Week," and the like are representative of these efforts, and seem to us not only singularly unsuccessful but contrary to modern psychologic concepts. This is an age of shock therapy. Our feeling is that a more practical approach would be the allocation of a single week in each year to all-out vindictiveness. "Bust-Your-Buddy Week," "Fix-Your-Friends Week," or something similarly alliterative is the answer. No holds barred during this period, and all the scheming malicious skulduggery conceived would be outwardly admired rather than condemned (and envied in our secret heart). Possibly this would release enough meanness in a single seven-day orgy to make the rest of the year more bearable. At least it would teach you suckers to stay on your toes.

Silly Syndrome: (1) Acute bronchitis; (2) acute enteritis; (3) sphincter spasm.

One of the sparkling facets of modern medicine is the, to all practical purposes, conquest of early lues. Penicillin has allowed a small firing squad to replace the haphazard uncertain army of former years, thus forcing urologists into the legitimate practice of medicine. To mix a metaphor with poetic license, in dedication to the new Sadie Thompson:

Since penicillin's golden dust
Has now released to mold and rust
The charnel house of human lust,
Our scientific spirits swell
To know at last that all is well
In Aphrodite's citadel.

We have noticed of late a new password among the younger doctors, a group which strangely becomes larger and larger with each passing year. Maybe you've noticed it, this product of rising categories and falling Armed Services physical requirements. It's pronounced in low serious tones: "Heard anything?"

Isn't it amazing the moments patients pick to call you on the phone. In fact, quite often it's downright uncanny.

Health Care Teamwork

PAUL JOHNSTONE, M.D.

For the last two years the doctor, the nurses and the hospitals of Missouri have consulted at regular intervals relative to the improvement of the care of the patient. This consultation has been brought about through the formation of the Joint Conference for the Improvement of the Care of the Patient, of Missouri. Here, through the State Medical, State Nurses and State Hospital Associations, many matters have been taken up.

Such regular consultations between the three great groups which care for the people of Missouri when they are sick and helpless was new. But now it is no longer untried.

The application of one rule to problems which have come before this body has become standard practice. This rule is, wherein lies the interest and the point of view of the people of Missouri when they are sick and helpless. In the light of this measuring rod it is remarkable how rapidly controversial matters become noncontroversial. Then joint action becomes possible. And the doctors, the nurses and the hospitals approach the care of the sick of Missouri as a team.

One state by itself cannot accomplish national solutions. But the doctors, the nurses and the hospitals of fourteen states should be a mighty force in accomplishing national solutions projected on the basis of wherein lies the interest and the point of view of the people of the United States when they are sick and helpless.

And by the time this reaches publication, the first meeting of the fourteen state Joint Conference will have been held.

New Drugs, New Faces, New Instruments

Caladryl Now Available in Convenient Cream Form Tube, Parke-Davis Announces

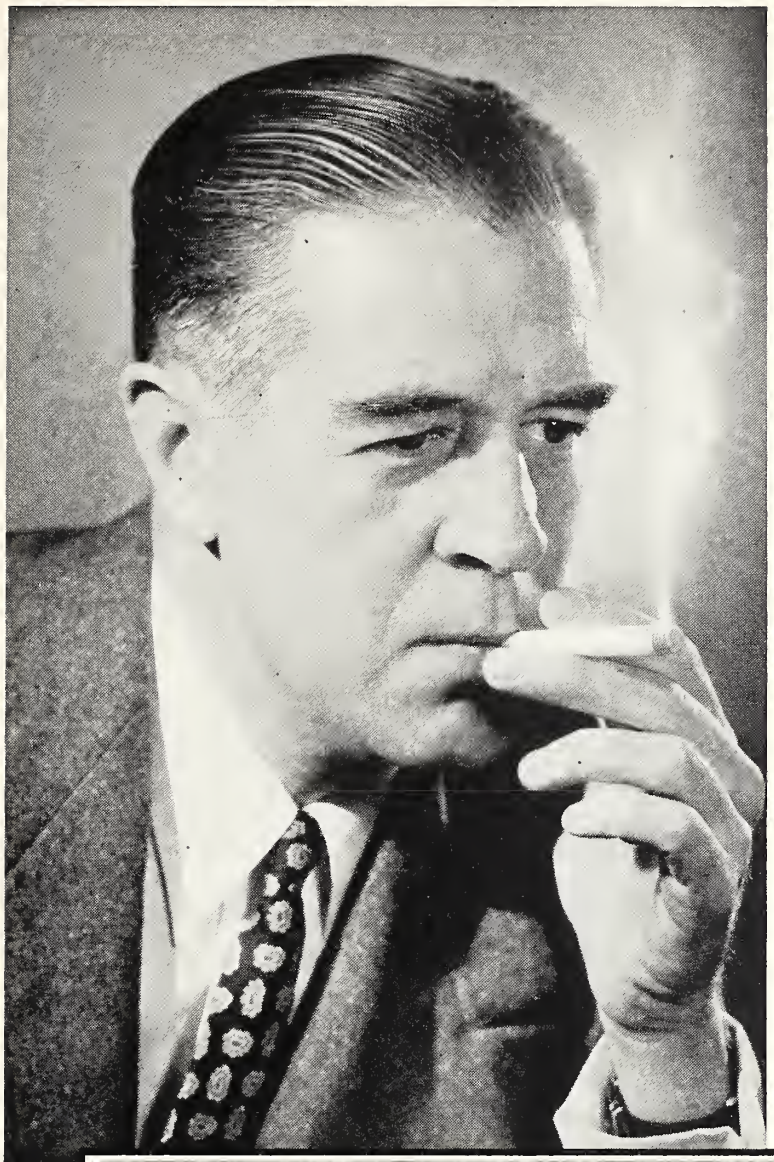
Caladryl, the Calamine-Benadryl preparation for soothing relief to burning or itching skin surfaces, now is available in convenient cream form in tubes, Parke, Davis & Company announced today. Caladryl contains 1 per cent Benadryl hydrochloride to provide effective antihistaminic and antipruritic action. Other ingredients, including calamine and camphor, provide additional soothing relief to skin surfaces. It is supplied in cream form in 1½ ounce collapsible tubes and also is available in lotion form in six-ounce bottles.

Caladryl is useful for relieving the burning and itching of light sunburn, prickly heat and diaper and cosmetic rashes. It also relieves itching associated with hives, mild poison ivy and poison oak, insect bites, chicken pox and minor skin infections.

A smooth, rich lotion or cream, Caladryl is easily applied, clings to the skin, does not rub off but can be easily rinsed off when desired. It does not stain clothing, is faintly perfumed, and has a light flesh color.

Camoquin Clears Malaria With Single Dose, Indian Army Physicians Report

A single dose of Camoquin, dihydrochloride dihydrate, cleared a large number of heavily-infected cases of malaria in soldiers within two days, two Indian Army physicians have reported.



Doctor, be your own judge... try this simple test

With so many claims made in cigarette advertising, you, Doctor, no doubt prefer to judge for yourself. So won't you make this simple test?

Take a PHILIP MORRIS and any other cigarette

1. Light up either one first. Take a puff—get a good mouthful of smoke—and s-l-o-w-l-y let the smoke come *directly* through your nose.

2. Now, do exactly the same thing with the other cigarette.

You will notice a distinct difference between PHILIP MORRIS and any other leading brand.

PHILIP MORRIS

Philip Morris & Co. Ltd., Inc., 100 Park Avenue, New York 17, N. Y.

Advertisement

From where I sit
by Joe Marsh

A Difficult "Situation"

Did you see that "Classified Ad" last week? The one that wanted a farmhand who had to be "an expert agriculturist, sheep herder, tractor driver, conversationalist, bridge player," *plus* being "an authority on chemistry, physics, and mathematics"?

Well, Slim Thomas, who ran that ad more or less as a joke, called us up yesterday and said, "I got 23 answers and almost every one claimed they could meet all *those qualifications! That means I want to keep the man I have—'Handy' Peters.*

"He was thinking of quitting but now I've *got* to talk him into staying. Handy never pretends to be an expert, he's just a good hired hand."

From where I sit, Slim's smart to be wary of people who consider themselves to be all-around "experts." Some folks will "expert" on anything—from the way a man should practice his profession to whether he ought to drink beer or buttermilk. Personally I don't want to "classify" myself as knowing all the right answers.

Joe Marsh

Copyright, 1953, United States Brewers Foundation

Drs. Inder Singh and T. W. Kalyanum of the Indian Army Medical Corps wrote in the *British Medical Journal* (4779:312, 1952) that the Parke, Davis & Company product proved superior to all other antimalarials in extensive clinical tests. They said that in benign malaria the average duration of fever was twenty-four hours after administration of Camoquin and thirty-three hours in malignant malaria. All parasitaemia cleared within forty-eight hours.

After comparison with other antimalarials, the doctors noted that "one finds a marked diminution in the relapse rate with larger doses of Camoquin. Apparently, this drug is superior in this respect to all other antimalarials and their various combinations."

Adequate dosage was found to be 350 to 400 mg. of Camoquin in benign malaria and about three times that amount in malignant malaria. Adequate concentrations, highest in the spleen, were maintained for a week or more.

BOOK REVIEW

PLASTIC SURGERY OF THE NOSE by James Barrett Brown, M.D., Professor of Clinical Surgery, Washington University School of Medicine, St. Louis, Mo.; Chief Consultant in Plastic Surgery, United States Veterans Administration, Washington, D. C.; Formerly Senior Consultant in Plastic Surgery, United States Army and in E.T.O., and Chief of Plastic Surgery, Valley Forge General Hospital; and Frank McDowell, M.D., Assistant Professor of Clinical Surgery, Washington University School of Medicine, St. Louis, Mo., with 379 illustrations including 48 in color. The C. V. Mosby Co., St. Louis, Mo. 1951. Price $15.00.

This work is a comprehensive discussion of surgery of the external nose. There are twenty-eight chapters grouped in six sections. Section 1 (General Considerations) treats of surgical anatomy, examination, indications for corrective rhinoplasty and preliminary work such as photographs, casts and measurements. Section 2 considers the different aspects of surgical reduction in the size of the nose, such as hump removal and lowering the dorsal line, narrowing the nose, shortening the nose and reconstruction of the lower lateral cartilages. Minute attention is given to detail and to miscellaneous adjustments which make the difference between fair and good final results. Section 3 covers the subject of building up and straightening the nose by osteoplastic procedures by transplants and the matter of the crooked or twisted nose.

The first three sections (more than half the book) are particularly interesting to the rhinologist as well as to the plastic surgeon while the last three sections are more particularly the domain of the pure plastic surgeon. They have to do with cleft lip, nasal deformities, skin grafts to the nose, the nose in relation to the rest of the face, tumors, scars and severe trauma.

The entire book is an interesting and understandable style, is excellent for the beginner in plastic surgery of the nose and also for the master of the subject who would review and improve his own knowledge. H. H. B.

Cordelia

AWARD WINNING BRASSIERES!

Cordelia surgical brassieres have won the Blue Ribbon for five consecutive years. Now, Cordelia has won BOTH the GOLD MEDAL and BLUE RIBBON AWARDS at the 1952 California State Fair Fashion Exhibit.

When she asks...

HERE ARE THE FACTS!

Most corrective, surgical and maternity brassiere problems have been scientifically solved by the staff of Physiospecialists at Cordelia of Hollywood.

THE GOLD MEDAL WINNER!

Each Cordelia brassiere is planned and made for easy, individual fittings by experts in local stores.

THE BLUE RIBBON WINNER!

Every Cordelia brassiere is a luxury in fashion fabrics — beautifully, youthfully designed. These are the facts judges took into consideration — then awarded *Cordelia the winner!*

Prescribe

Cordelia®

OF HOLLYWOOD BRASSIERES

3107 Beverly Blvd.
Los Angeles, Calif.
DUnkirk 3-1365

California's leading creator and manufacturer of scientifically designed surgical, corrective, maternity and style brassieres.

Originators of the famous "Control-Lift" design

ACCEPTED FOR ADVERTISING IN PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION

"Control-Lift" Brassieres Available at These Stores

Bartel's Merc. Co., Cape Girardeau
Ireland Shop, Chillicothe
Famous Barr Co., Clayton
Georgia Ann Shop, De Soto
Stella's Fashion Shop, Excelsior Springs
Price Dress Shop, Fredericksburg
Mary Irwin Shop, Festus
El Jane Shop, Ironton
Farrar's, Kansas City
W. E. Isle Co., Kansas City
Kline's Inc., Kansas City
Peggy Ann Dress Shop, Kansas City
Fay's Lingerie Shop, Kirksville
Love's Lingerie Shop, Kirkwood
Hirsch Bros. Dry Goods Co., St. Joseph
Famous Barr Co., St. Louis
Viola Hacking Corset Shop, St. Louis
Lockhart's, St. Louis
Scruggs Vandervoort Barney, St. Louis
Stix Baer & Fuller Co., St. Louis
Anna Vacarro, St. Louis
Elite Shop, Sikeston
Rosa M. Bridges Corset Shop, Springfield
Miss Carr's, West Plains

Councilor District News

FOURTH COUNCILOR DISTRICT

JOHN O'CONNELL, OVERLAND, COUNCILOR

A dinner meeting at the Southern Air, Wentzville, on January 29, of physicians in Lincoln, St. Charles and Warren counties brought about the hyphenation of the Lincoln and St. Charles County Medical Societies. **Dr. John O'Connell**, Councilor of the District, presided at the meeting. The new hyphenated Society will be designated, the Lincoln-St. Charles County Medical Society.

Officers elected are: **Herbert McMurray**, M.D., Wentzville, president; **E. O. Damron**, M.D., Elsberry, vice president; **J. C. Creech**, M.D., Troy, secretary-treasurer; **E. O. Damron**, M.D., delegate, and **Norman Muschany**, M.D., Troy, alternate, from Lincoln County, and **Don Randall**, M.D., St. Charles, delegate, and **E. J. Canty**, M.D., St. Charles, alternate, from St. Charles County.

The scientific program of the evening was given by **Ben H. Senturia**, M.D., St. Louis, who presented an interesting and informative discussion of "Diseases of the External Auditory Canal."

There were twenty-three physicians in attendance.

J. C. Creech, M.D., *Secretary.*

FIFTH COUNCILOR DISTRICT

J. L. WASHBURN, VERSAILLES, COUNCILOR

Audrain County Medical Society

The Audrain County Medical Society held its February meeting at the Audrain County Hospital on Thursday night, February 19.

R. O. Muether, M.D., St. Louis, spoke on "The Present Status of ACTH and Cortisone." **Mr. Ray McIntyre**, Field Secretary of the Association, discussed briefly the idea of hyphenating two or more county societies in that specific area.

Harry F. O'Brien, M.D., *Secretary.*

Callaway County Medical Society

The January meeting of the Callaway County Medical Society was held January 15 in Fulton as a dinner meeting.

Following dinner at the Country Club, the meeting moved to the clinic building of the State Hospital for the scientific program, which was presented by **James A. Atkins**, M.D., Columbia, who discussed "Arteriosclerosis and Some Associated Conditions." **Mr. Ray McIntyre**, Field Secretary of the Association, was present and gave a short talk on the possible hyphenation of some of the county societies in the area.

R. N. Crews, M.D., *Secretary.*

Others Say

One Man's Opinion

Some time soon the leaders of these two professions (osteopathy and medicine) are going to have to sit down together and discuss the problem of living together so that the interests of both and the interests of the public can be protected. Nobody knows when this will be done, but if this court decision is the agent which brings this about, then much good can and should result.

As has been stated before, material on this page is the opinion of the writer. It is not necessarily in any way the opinion of the Society nor any of its officers.—G. Wilse Robinson, Jr., M.D., *Jackson County Medical Society Bulletin.*

The Secret Ballot—a Great Blessing

On all sides we hear analyses and explanations of the recent election—an election which once again "stumped the experts." Why it happened must always be a matter of opinion, but one thing is certain it could not happen except for a great American blessing—the secret ballot.

Senator Wayne Morse says the people were fooled. Perhaps our psychiatric friends can detect a projection mechanism on the Senator's part. We presume that he refers to the 33,000,000 who disagreed with him and Mr. Truman. We don't think they were fooled nor do we think that the 26,000,000 who voted in agreement with Senator Morse were fooled. All 59,000,000 were exercising the greatest American privilege—a free choice determined by personal conviction and guaranteed by a secret ballot.—Editorial, *Westchester Co. (N. Y.) Medical Bulletin.*

Why Not Springfield?

In looking back over our thirty years of practice in Springfield we are greatly impressed by one special trend that has been taking place . . . a considerable number of extra well trained medical men are being attracted to Springfield. These doctors are not only well trained but are very fine young men as to intelligence, personality and character. Their training has for the most part been long and thorough. Many of the men are either Board licentiates or are qualified to take the examinations for Board Certification. This trend started before our hospitals began to expand and undoubtedly has been increased as a result of our improved hospital situation. It is still going on.—F. T. H'Doubler, M.D., *Greene County Medical Society Bulletin.*

Heeding Protests

"Protests have been made at various times that medical care is being denied certain individuals because of its cost. As is well known, the prime object of the medical profession is to serve humanity, regardless of reward or financial gain, and with a view to implementation of this principle a number of county medical societies have successfully conducted and publicized programs offering to provide the services of a physician to anyone unable to pay for them, which we believe have conclusively answered such protests.

"The Board of Trustees urges that the American Medical Association heartily endorse such medical care programs and undertake an energetic campaign to implement them, that the constituent state medical societies be encouraged to organize and vigorously

promote similar campaigns embodying the principles of such programs, and that these campaigns be made known to the public through every effective medium of communication."—George F. Lull, M.D., *Secretary's Letter.*

For the Mentally Ill

Missouri's legislators may as well make up their minds to give a careful continuing study to the needs of the state's five mental hospitals and 13,000 patients. And Missouri's citizens may as well decide that improvements, overdue and needed, are going to cost some money.

The state's outlay of funds . . . has not been sufficient to provide proper treatment.

Experts familiar with the problem would say that Missouri's per patient cost last year, $1.89, lowest of any state in this area except Tennessee, is a clue to the difficulty. To spend some more on this activity, where is means salvaging of human lives, is more than just good business.—*Kansas City Times.*

Parenteral Fluid Versus Parenteral Food

That protein can be utilized in spite of inadequate calories has also been established in other observations with oral feeding as well. This phenomenon is of practical importance because it means that during critical periods when a full caloric intake is temporarily impossible or undesirable, tissue protein wastage can still be reduced or prevented. A mixture of protein and carbohydrate is better nutritionally than carbohydrate alone, even when calories are inadequate. In terms of parenteral nutrition limited to 200 gm. of solids in 2 liters of water, it is, therefore, preferable to give 100 gm. each of an amino acid mixture and glucose, than 200 gm. of glucose alone. A patient should not be deprived of all protein food just because it is not feasible to achieve the most efficient utilization thereof: "Half a loaf is better than none."—Robert Elman, M.D., in *Surgery.*

Your Patients Read

"Hope for Troubled Minds." *The American Magazine,* March.

"New Man of Medicine." *Reader's Digest,* March.

"Heroes of Medical Experiments." *Reader's Digest,* March.

"We're Selling Out Our Disabled Veterans!" *Colliers,* Feb. 14.

"These Tools Help Keep Your Body in Repair." *Collier's,* Feb. 7.

"What We Doctors Must Do." *Collier's,* Jan. 17.

"What You Read Here May Save Your Life." *Collier's,* Jan. 24.

"Alcoholism." *Good Housekeeping,* January.

"Should Doctors Tell the Truth?" *Coronet,* January.

"Polio Is Being Defeated." *McCall's,* January.

"Miracle Drugs." *Charm,* January.

"The Wonderful Medicine Plant." *Saturday Evening Post,* Feb. 21.

"What to Do About Hiccups." *Parents' Magazine,* February.

"If Your Child Is Hard of Hearing." *McCall's,* February.

"What You Can Do About Backache." *Everybody's Digest,* March.

"Successful Failures Have Ulcers." *Esquire,* February.

"Modern Medicine's Newest Problem." *Better Homes & Gardens,* February.

"Antibiotics: General Information." *Look,* February.

"The New Self-Administered Anesthesia." *Pageant,* February.

"The Truth About Artificial Insemination." *Brief,* February.

"New Weapons Against Heart Disease." *Coronet,* March.

BOOK REVIEW

Handbook of Pediatric Medical Emergencies, by Adolph G. DeSanctis, M.D., Professor of Pediatrics and Chairman of the Department of Pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center; and Charles Varga, M.D., Instructor in Pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center. With fifty-one illustrations. St. Louis. C. V. Mosby Company. 1951. Price $5.00.

The distinct value of this publication is that it contains much easily found pertinent information to assist in the everyday practice of medicine, particularly as a reference when confronted with emergency type of care. It is also a recording of the most modern diagnostic and therapeutic technics which are routine in children's centers but which may not be familiar to the outlying hospital confronted with emergency child care. It is, therefore, a particularly excellent desk reference in the physician's office and an excellent reference for the rural hospital in the care of the child. It is not, however, the type of book which would be of great value as a library reference.

P. G. D.

PHARMACEUTICALS
A complete line of laboratory controlled ethical pharmaceuticals. Chemists to the Medical Profession since 1903.
MO. 3-53
ZEMMER
THE ZEMMER CO., PITTSBURGH 13, PA.

Have they been tested on *ALLERGIC PATIENTS?*

★ When you prescribe hypo-allergenic beauty aids, ask this one question: "Have these cosmetics been clinically tested on allergic patients?" You can depend on it, *AR-EX Cosmetics have been clinically tested on allergic patients.* Prescribe them by brand name.

AR-EX COSMETICS, INC. 1036 W. Van Buren St. • Chicago 7, Ill.

AR-EX HYPO-ALLERGENIC COSMETICS

CLINICALLY TESTED FOR ALLERGIC PATIENTS

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WIlson 9258

You Are Invited to Attend

The Fifth Annual

MID-WEST CANCER CONFERENCE

April 2-3, 1953

Broadview Hotel, Wichita, Kansas

GUEST SPEAKERS

William Boyd, M.D.
University of British Columbia
Vancouver, B. C.

Paul C. Bucy, M.D.
Professor of Neurology
University of Illinois

Ernest M. Daland, M.D.
Chief of Staff
Pondville Hospital

Juan A. del Regato, M.D.
Director, Penrose Cancer Hospital
Colorado Springs, Colorado

Henry S. Kaplan, M.D.
Professor of Radiology
Stanford University Hospitals

Cushman D. Haagensen, M.D.
Assoc. Prof. Clinical Surgery
Columbia University

Cornelius P. Rhoads, M.D.
Director, Memorial Hospital
New York, New York

Isidore Snapper, M.D.
Director of Medical Education
Mt. Sinai Hospital, New York, N. Y.

Sponsored by

Kansas Division, American Cancer Society-The Kansas Medical Society

County Societies in Affiliation with the Missouri State Medical Association

County	District	President	Address	Secretary	Address
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Chas. L. Garcia	Mexico	Harry F. O'Brien	Mexico
Barton-Dade	8	H. M. Arnold	Lamar	Lee A. McNeel, Jr.	Greenfield
Bates	6	D. C. Ronald	Butler	D. T. Hatcher, Jr.	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	Horace E. Thomas	Columbia	Charles Lamke	Columbia
Buchanan	1	F. G. Thompson	St. Joseph	Allen I. Herman	St. Joseph
Butler	10	C. A. Post	Poplar Bluff	W. E. Henrickson	Poplar Bluff
Callaway	5	Ralph Hanks	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	John Harry Keim	Cape Girardeau	Harold D. Ridings	Cape Girardeau
Carter-Shannon	9	Harry Rollins	Winona		
Cass	6	Edward S. Jones	Harrisonville	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	P. V. Dreyer	Huntsville	Clarence C. Cohrs	Moberly
Clay	1	G. E. Sanders	Excelsior Springs	S. R. McCracken	Excelsior Springs
Clinton	1	W. B. Spalding	Plattsburg	R. E. Wilbur	Cameron
Cole	5	E. L. Loyd	Jefferson City	H. V. Guhleman, Jr.	Jefferson City
Cooper	5	Howard L. Wilcox	Boonville	J. C. Tincher	Boonville
Dallas-Hickory-Polk	8	Evelyn Griffin	Buffalo	George Robinson	Humansville
Dunkin	10	Joe Zimmerman	Kennett	E. L. Spence	Kennett
Franklin-Gasconade-Warren	4	Carvel T. Shaw	Hermann	Michael S. Wepprich	Washington
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, De Kalb)	1	V. D. Vandiver	Chillicothe	E. A. Duffy	Trenton
Greene	8	W. J. Marshall	Springfield	Charles E. Lockhart	Springfield
Henry	6	Hugh B. Walker	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound city
Howard	5	Joseph Gardner	Glasgow	Wm. J. Shaw, Jr.	Fayette
Jackson	7	Claude J. Hunt	Kansas City	Kenneth C. Hollweg	Kansas City
Jasper	8	R. M. Ferguson	Webb City	Katherine Kiehl	Joplin
Jefferson	4	Thomas A. Donnell	De Soto	J. F. Rutledge	Crystal City
Johnson	6	O. H. Damron	Warrensburg	T. Reed Maxson	Warrensburg
Laclede	9	J. H. Hope	Lebanon	G. E. Fisher	Lebanon
Lafayette-Ray	6	Melvin Masterson	Richmond	M. C. Johnson	Richmond
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln-St. Charles	4	H. C. McMurray	Wentzville	J. C. Creech	Troy
Marion-Ralls	2	D. B. Landau	Hannibal	R. J. Lanning	Hannibal
Miller	5			Carl T. Buehler, Jr.	Eldon
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)	10	Marvin Grossman	Fredericktown	Byron Taylor	Flat River
Moniteau	5	E. A. Kibbe	California	K. S. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	J. L. Washburn	Versailles	Ruth Kauffman	Versailles
Newton	8	L. E. Rolens	Granby	L. T. Taylor	Neosho
Nodaway-Atchison-Gentry-Worth	1	E. D. Imes	Maryville	Charles D. Humberd	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Val E. Miltenberger	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	A. J. C. McCallum	Aurora	R. R. Donley	Monett
Pemiscot	10	C. D. Kaiser	Hayti	C. C. Castles	Caruthersville
Perry	10	O. A. Carron	Perryville	L. F. Lutkewitte	St. Marys
Pettis	6	P. V. Siegel	Smithton	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	F. A. Elders, Jr.	Cuba	M. K. Underwood	Rolla
Pike	2	Charles H. Lewellen	Louisiana	Q. R. Johnson, Jr.	Louisiana
Platte	1	L. C. Calvert	Weston	D. M. Miller	Platte City
St. Louis City	3	A. N. Arneson	St. Louis	David N. Kerr	St. Louis
St. Louis	4	Guy N. Magness	St. Louis	Roy A. Walther, Jr.	Overland
Saline	6	J. R. Lawrence	Marshall	James A. Reid	Marshall
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)	10	W. J. Ferguson	Sikeston	Wm. C. Critchlow	Sikeston
Shelby	2	Perry C. Archer	Shelbyville	T. J. Hoerchler	Shelbina
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Scott G. Kramer	Houston	A. C. Ames	Mountain Grove
Vernon-Cedar	6	T. B. Todd	Nevada	W. H. Allen	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour

INDEX TO ADVERTISERS

Abbott Laboratories 197
A. S. Aloe Company 209
American Cancer Society 232
American Meat Institute 173
Ames Company, Inc. 164
Ar-Ex Cosmetics, Inc. 232
Ayerst, McKenna & Harrison, Ltd. 204

Bayer Company 177
Blue Cross-Blue Shield 217

Canada Dry Ginger Ale, Inc. 233
Coca-Cola Company 165
Cook County Graduate School 233
Cordelia of Hollywood 227

Duncan Laboratories 198

Fairmount Hospital 236

Hamilton-Schmidt Surgical Co. 232

W. E. Isle Company 236

Katz Drug Co. 229
Keeley Institute 235

Lederle Laboratories ..... Insert
Eli Lilly & Company 178
Luzier's, Inc. 192

Mead Johnson & Company 240
Medical Protective Company 233
Merck & Company, Inc. 239
Milwaukee Sanitarium 215

Neurological Hospital 221
Norbury Sanitarium 236
North Shore Health Resort 234

O'Connell Bros., Inc. 235
Orgo Products 235

Parke, Davis & Company 162-163
Pathologists' Meeting 238
Chas. Pfizer & Company, Inc. 219
Philip Morris & Co. 225
Physicians Casualty Association 234

Ralph Sanitarium 222
Remington Arms Co., Inc. 236

Schering Corporation 171
G. D. Searle & Co. 191

United Insurance Co. 230
Upjohn Company 175
U. S. Brewers Foundation, Inc. 226

Washington University 236
West Texas Maternity Hospital 232
Winthrop-Stearns, Inc. 169
Dorothy Worrell 238
Wyeth, Inc. 167

Zemmer Company 231

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Announcing

JOINT MEETING

South Central Region
College of American Pathologists
Kansas and Missouri Societies of Pathology

and

The Kansas and Missouri Divisions
American Cancer Society, Inc.

Friday Afternoon and Saturday, March 13 & 14, 1953
Kansas University Medical Center—Kansas City, Kansas

Symposium—Laboratory Diagnosis of Renal Diseases
Participants—*Harvey L. White, M.D.*, Professor of Physiology, Washington University School of Medicine, St. Louis, Missouri.

Benjamin B. Wells, M.D., Ph.D., Professor of Medicine, University of Arkansas School of Medicine, Little Rock, Arkansas.

Melvin L. Goldman, M.D., Assistant Clinical Professor of Medicine, Washington University School of Medicine, St. Louis, Missouri.

Robert W. Mowry, M.D., Assistant Professor of Pathology, Washington University School of Medicine, St. Louis, Missouri.

Seminar—Diseases of the Kidney—
Guest Conductor—*Paul Kimmelstiel, M.D.*, Pathologist to The Charlotte Memorial Hospital, Charlotte, North Carolina.

Make plans now to attend. Address requests for hotel reservations to Hotel President, Kansas City, Missouri

Curiosa et Trivia

William B. McCunniff, M.D.

Mrs. Vara M. Smith, writing a thesis in psychology, inquired of unselected people how they rated different professions from the standpoint of prestige. Doctors rated first, then probably the poorest paid, teachers. Lawyers, who rated third in the poll, were the only group of twenty professions who failed to rate physicians first.

Rudolph Valentino is said to have died of a perforated peptic ulcer; his operation: acute appendicitis. Drainage down the right colic gutter from his perforation had produced appendiceal symptoms and findings.

Need more horsepower? States which have speed limit of 50 mph (and enforce it) have approximately one half the death rate on highways as other states. Long Island Parkways with speed limits of 35 and 40 have one eighth the death rate of the Pennsylvania Turnpike.

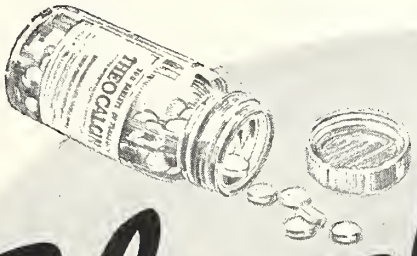
One ounce of rennet will clot 2,800,000 quarts of milk.

A sterling silver syringe with leather piston and blunt needle was used in 1836 by Drs. Taylor and Washington of New York, but incision through the skin was necessary to insert the needle. Twenty-three years later, in 1859, Charles Hunter of London, sharpened the needle to a cutting point.

For word coining, straight thinking and sound philosophy, an editorial, "Parenteritis: An Iatrogenic Disease" in January 1953 *Postgraduate Medicine,* is superior material.

The surprising, but harmless, snap of static electricity received on getting out of a car, represents from 3,000 to 5,000 volts—luckily at very low amperage!

Nineteenth Century Philadelphia gynecologist, Robert P. Harris, described twenty cases of deliveries from lacerations by cow's horns, of which five babies lived; commented "this was a better showing for the cow horn than for the knife."



Theocalcin

For the Failing Heart of Middle Life

Prescribe 2 or 3 tablets of Theocalcin, t. i. d. After relief is obtained, continue with smaller doses to keep the patient comfortable. Theocalcin strengthens heart action, diminishes dyspnea and reduces edema.

Brand of theobromine-calcium salicylate, Trade Mark reg. U. S. Pat. Off.

Bilhuber-Knoll Corp. Orange, N. J.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

We Must Not Relax

John W. Cline, M.D., *San Francisco*
Immediate Past-President, American Medical Association

The future of American medicine now appears brighter than for some years. The President, his principal associates and the majority leaders of both Houses of the Congress have stated their unalterable opposition to compulsory health insurance and all forms of socialism. Majorities of both parties in Congress have taken similar positions.

These circumstances provide a great opportunity for the medical profession. If we make the most of it we may dispel the threat of socialized medicine forever. If not, we shall have ourselves to blame.

As physicians we are directly concerned with the medical welfare of our people. We have done much to improve standards of medical care and will continue so to do. In recent years we have done much to make superior medical care available to all segments of the population. Much remains to be done if we are to achieve the objectives so clearly stated by Dr. Louis Bauer in his address to the House of Delegates of the American Medical Association in December. By giving full support to sound, realistic programs we may insure that we never again will be placed in the position of four years ago.

At the same time we must be alert to insidious efforts to extend the activities of the Federal government in fields in which it does not belong. In the past many things have been achieved by indirect and, at times, illegal, means which would have been impossible of accomplishment by more direct and honest methods.

The socializers will be less influential, probably less vocal and will lack the support of government which they previously enjoyed. But they will be no less determined. Whatever the exact shades of political color and ideology, they all are convinced that progress can be made only through direction by an omnipotent, and presumably omniscient, government. They deny that Americans have the capacity to work out their own destinies.

The concept of the socializers demands that individual freedom, responsibility and initiative be supplanted by ever expanding paternalism. Their ideas have undergone no change. On the day following election former Senator Benton made the observation that the American people were in greater need of adult education than he previously had believed.

We must not relax. This is not the time for complacency. In our role as physicians we have much to do and in our capacity as citizens perhaps even more.

Our forebears endowed us with a priceless heritage. We have an obligation to protect and improve it for ourselves and to preserve it for the countless generations who will follow us. Great as is the threat of subversive activity by disloyal citizens, still greater is the threat of indifference and inactivity by otherwise loyal Americans.

Preoperative Transfusions in Geriatric Surgery

In operations of election it is now fairly commonplace to correct blood deficits by transfusion before operation rather than to wait and transfuse only in case of circulatory impairment during or after operation. Pronounced loss of weight leads to a deficit in both the red cell mass and the total circulating plasma proteins. . . . Indeed, many surgeons do not hesitate to use blood transfusions in preparing severely malnourished patients even if the red counts and hemoglobin concentrations are normal. . . .

What needs to be emphasized is the special importance of recognizing and correcting deficits in the older group because deficits are much more hazardous in operating on older patients than they are in the younger group. At the same time, mistakes in correcting deficits are more serious in older than in younger patients. A note of caution is therefore in order lest undue consideration be given laboratory data just because they are expressed in exact numerical terms. Clinical judgment tempered by sound physiologic knowledge is still a useful guide to replacement therapy. . . . Unnecessary and excessive blood transfusions must be counted as more harmful than none at all. . . . Needed biochemical replacement should be early rather than late, or to quote Owen Feltham, "Prevention is the best bridle."—Robert Elman, M.D., *Archives of Surgery.*

...“truly extraordinary” results in intractable bronchial asthma

Cortone®

ACETATE
(CORTISONE ACETATE, MERCK)

In a review article on hormonal therapy,[1] complete relief of symptoms was reported in 62 per cent of 116 asthma patients. Another 24 per cent were made “quite comfortable.” Duration of relief varied widely, with remissions occasionally lasting as long as several months. The author calls these results “truly extraordinary.”

[1]Evans, R. R., and Rackemann, F. M.: *A.M.A. Arch. Int. Med.* **90**:96–127, July 1952.

All* CORTONE *Tablets carry this trade-mark:

Before treatment. Observe typical facies and tense sternocleidomastoid.

After therapy with CORTONE. Note relaxation of accessory muscles of respiration.

CORTONE *is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

© Merck & Co., Inc.

With Our G. P.'s

William J. Shaw, M.D.

The general practitioner, according to Louis H. Bauer, American Medical Association president, is the custodian of the much discussed and sought after doctor-patient relationship. In a recent address Bauer recommended, and the House of Delegates of the American Medical Association approved, the appointment of a committee to see if some changes could be made to increase the flow of general practitioners, lessen the flow of specialists, and make general practice a requisite for specialization.

William J. Shaw, M.D.

To the hundreds of busy, successful family doctors who attend the meeting of the Missouri State Medical Association in Kansas City, April 26-29, this recommendation will be accepted but will not create too much discussion. The program of this meeting is definitely planned for general practitioner interest.

In addition to the installation of General Practitioner E. Claude Bohrer as President, many other out-state general practitioners will actively participate in session activities. Dr. W. A. Broyles, an indefatigable worker from Bethany, will preside at the general meeting Wednesday morning. Dr. W. L. Allee, Past President of the Association and delegate to the American Medical Association, will contribute sage advice to the Committee on Constitution and By-Laws. Dr. A. S. Bristow, Trenton, another state Past President and a member of the American Academy of General Practice committee on Legislation and Public Policy; Sixth District Councilor R. W. Kennedy, Marshall, and other members of the Committee on Rural Medical Service will present their reports to the House of Delegates. Dr. Loren Washburn, Versailles, Fifth District Councilor, will industriously supervise the activities of his thirteen counties.

Meetings of this type, planned by representative members of medical practitioners, including congenial discussions between specialists and general practitioners relative to their mutual problems are an important contribution toward popularization of the practice of general medicine.

Crossroads Comment

P. V. Siegel, M.D.

"Dear Uncle Ted:

Last week I read a two-column spread in the K.C. paper that sort of flattened out my crew cut. Fact of the matter is I've just been able to get it to stand again. Some folks have complained about the goose-grease. Understand too the same article created a commotion sort of like a wasp in a backhouse up there in the city.

Brought to mind a bit of the Good Book: Let him who is without sin cast the first stone. (That's according to the Gospel of St. John, Chapt. 8, 7th verse. I had to look it up so it will save you the trouble.)

In case you don't remember, the subject was emergency medical service. Down here we talk about house calls. I found out early that making house calls was a good way to get patients and keep them, so I make a few. The piece was in a paper that circulates around 350,000. I calculate in the neighborhood of a cool million were exposed to it.

Worst part is like so many of 'em, the eructation came from one of our own profession. Come to think of it I never heard tell of a psychiatrist making house calls. It seems downright gruesome when one considers he is also the editor of a rather large medical bulletin. I always figured that of all people editors should be a bit discreet.

No way of calculating how much damage that piece did to our profession and to the Docs who do make their house calls. Can't never remember hearing nor reading the likes by any other branch of the healing art.

In the last six months I have read: (1) no G.P. is qualified to do any kind of surgery (isn't 80 per cent of it done by G.P.'s?); (2) that doctors, particularly the young ones, are a bunch of money grabbing so-and-so's (I must have missed that course in school); (3) that young docs fail to assume the ideals or responsibilities of his profession (wouldn't have many patients if we didn't make house calls). How does one get to be an old doctor without first being a young 'un? In the ten years that I have been out of school, I have been led to believe by the big union that we are up against a last ditch fight. I can't figure out how this sort of tripe is going to change it.

Let our elders rave all they please behind the doors of our medical society or in medical journals. They can have the floor for as long as they have breath. But in the future, for public print—

Let him who is without sin!!!

Your slowly aging nephew,
Pete

Your Laboratories . . .
Our Responsibility

Duncan
Laboratories
Established 1921

KANSAS CITY, MO.,
909 Argyle Bldg.

JOPLIN, MO., *230 Frisco Bldg.*

Associated
Laboratories

INDEPENDENCE, MO.
Physicians Laboratory
First National Bank Bldg.

LEXINGTON, MO.
Lexington Memorial Hospital

SEDALIA, MO.
Bothwell Memorial Hospital

WARRENSBURG, MO.
Warrensburg Medical Center

Curbstone Consultation

Of all the endocrine glands the thyroid is the most common site for tumors. The symptoms of these neoplasms are often insidious. Early symptoms include a discrete lump in the thyroid area, dysphagia and voice changes caused by pressure on the larynx.

From: THE CANCER BULLETIN, p. 73, May-June, 1952, Missouri Edition.

Pathologically Speaking

ELECTROLYTES

During the past few years a great deal of interest has been aroused in a better understanding of body fluids.

Water and electrolyte solutions properly prepared and administered enable the physician to save many lives. By the same token, many patients are lost because of a deficiency of water and/or electrolytes. Deficiency of electrolytes may easily lead to death. One may also use water and/or electrolytes injudiciously and create serious and sometimes fatal complications by producing an excess of any of these constituents.

Problems concerning water and electrolyte imbalance occur in practically all fields of medicine and should not be considered only as a surgical problem. Among the chief medical problems are those involving patients having prolonged vomiting or diarrhea, as in acute gastro-enteritis, pyloric or intestinal obstruction, uremia, acidosis of diabetes and untreated cardiac decompensation. Children with gastro-enteritis develop electrolytic imbalance far more quickly than do adults. For the surgeon, the greatest problem occurs in the patient with prolonged vomiting or diarrhea or with prolonged gastric negative suction where large quantities of electrolytes are lost.

To a certain degree, there is a relationship between water and electrolyte balance. However, this is not always true. Glucose and water given intravenously may actually wash out important ions, such as sodium and potassium, if the glucose solution produces diuresis.

From the practical aspect, the laboratory can give very useful and at times diagnostic information. The introduction of the flame photometer has been of great value in estimating sodium and potassium levels. The accuracy and rapidity of reporting is of great value therapeutically. If patients are maintained entirely on parenteral fluids, daily levels of the important ions should be determined, at least until balance is achieved.

Estimation of chlorides is easy and the value is well established. The CO_2 offers indirect measurement of the bicarbonate ion in the determination of states of acidosis or alkalosis. Laboratory data concerning the levels of sodium, potassium, carbon dioxide and chlorides offer the clinician an excellent opportunity to correct deficiencies, correct water balance and to institute or proceed with therapeutic measures.

Additional laboratory procedures of value in this field include serial counts of red blood cells, hemoglobin, serum proteins and hematocrit. Urine chloride values are very helpful, and the test for them is rather simple to perform.

RALPH EMERSON DUNCAN, M. D.
LORAINE E. SCHULTZ, M. D.
ALBERT E. UPSHER, M. D.

Forty Years Ago

Clyde P. Dyer, M.D.

April, 1913: the new Washington U. Medical School has a wonderful group of buildings and a most capable staff for the students . . . there is a likelihood of reorganization of the A.M.A. with Fellows and Members, so that all members of the state medical societies will be included and represented in the House of Delegates. . . . Iron County Medical Society has been revived and will affiliate with the State Association. . . . Kansas City is the site of new Missouri Biologic Laboratory, the Sophian-Hall-Alexander Laboratory for Biologic Products. . . . One of the first acts of Charles G. Revelle, new state superintendent of insurance, was the revocation of the order prohibiting issuance of indemnity policies to physicians, dentists and druggists in malpractice suits.

Hookworm has made its appearance in Missouri —State Bacteriologist has found it in Pemiscot and Dunklin counties. . . . Greene County has instituted prosecutions against medical fakers in Springfield—the Society has evidence against several of the vampiric creatures who prey on the credulities and frailties of afflicted persons. . . . Dr. Chas. W. Fassett of St. Joseph is arranging to conduct a party of physicians on European tour in connection with International Congress of Medicine at London in August—the tour will cover a period of forty-nine days and include visits to the clinics of the Old World.

Efforts to raise funds for a Lister memorial are going ahead slowly, according to Dr. W. W. Keen. . . . Notice that Dr. Chas. H. Eyerman (now editor of *St. Louis Medical Society Bulletin)* is an applicant for membership in St. Louis Medical Society. . . . Councilor of the Thirteenth District (Jackson County) is Dr. F. E. Murphy. . . . President of Jackson County Medical Society is Dr. N. P. Wood, Secretary is Dr. W. J. Walker. . . . "All Aboard for A.M.A. meeting in Minneapolis" seems to fill the State Journal.

Forty Years Later, 1953: A.M.A. in New York City June 1-5. . . . December we have the A.M.A. in St. Louis. . . . Missouri State Medical Association April 26-29 in Kansas City. Are you going? If not, why?

(This copy was received just a few days before the news of Dr. Dyer's death. We believe he would want us to run it, even posthumously, as he was one of the best known medical editors in the United States. We believe he would approve publishing this. V. T. W.)

Division of Health

James R. Amos, M.D., *Director*

Industrial Hygiene Program

Engineering studies to evaluate the exposure to toxic materials used by industry have been made in many Missouri plants. These have included dust studies to determine the potential silicosis hazard in mines, foundries, quarries, brick plants, monument shops and many other varied industries and studies of the heavy metals such as lead, zinc, mercury, chromium and cadmium. Solvents are used extensively in industry and each is a separate problem because of the varying toxicity of the different compounds. The problem of solvents is frequently complicated, both with respect to collecting atmospheric samples and evaluating the exposure, because several of the compounds may be used as a mixture. Gases such as ozone, carbon monoxide, phosgene and oxides of nitrogen are often found in industry as waste or by-products.

Consequently an engineering study is usually preceded by a plant survey. The purpose of this survey is to determine locations where potentially hazardous materials are used or produced and then individual studies are made at each location. When the study determines that toxic materials are present in excessive quantities, recommendations are submitted for control.

An industrial hygiene service is ideally preventative rather than curative, and is designed to control exposures to toxic materials before the occupational disease develops. Industries with known hazards are visited routinely and studies made of the dangerous operations. The Division also depends on requests from plant management, individual employees, unions and occupational disease reports from physicians to locate and evaluate dangerous areas. By these means the work areas most likely to be dangerous are brought under control.

Industrial health problems are becoming more complex primarily as the result of the rapid advances in the field of chemistry. One problem which has not been solved involves the use of the new insecticides, particularly the group identified as organic phosphates. This group is highly toxic and is now being put on the market in small packages for home use. The solution therefore will require education of the individual consumer as well as control of exposures in the plant.

The plant physician is the key individual upon whom management depends to preserve the health of his employees. The Division of Health maintains an industrial hygiene service to assist plant physicians in identifying and evaluating potential occupational hazards.

cortisone + SCHERING = Cortogen

the symbol SCHERING denotes leadership in steroid hormone research and manufacture -- including Cortogen in the most useful clinical forms. For systemic therapy, use Cortogen tablets SCHERING or injection. For eye disorders use Cortogen ophthalmic suspension -- sterile. The Schering seal SCHERING appears on each tablet and package -- your assurance of quality.

CORTOGEN®

Acetate (cortisone acetate, Schering) Tablets, 5 mg. and 25 mg.;
Injection, 25 mg. per cc., 10 cc. multiple-dose vials;
Ophthalmic Suspension—*Sterile*, 0.5% and 2.5%, 5 cc. dropper bottles.

Schering CORPORATION · BLOOMFIELD, NEW JERSEY
In Canada: Schering Corporation, Ltd., Montreal.

CORTOGEN

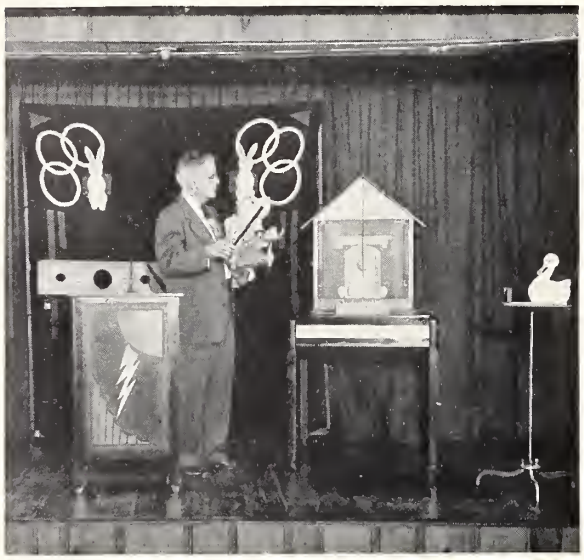
SCHERING

What Is Your Hobby, Doctor?

"It's Magic"

To most Missouri physicians, Milton D. Overholser is best known as an astute follower of Vesalius and Spalteholtz, as Professor of Anatomy at the University of Missouri.

Like so many men, however, whose training and studies are serious and solid, "Obie" has another human side also well-known to many practitioners of medicine, as well as to thousands of practitioners of magic throughout the United States.



As a boy of 10 he became completely intrigued with the prestidigitations of a "trusty," an inmate of the State Hospital at Nevada, Missouri. Overholser's father was Superintendent, and the lad was given ample opportunity to follow his hero, the patient, who "taught me all he knew and let me borrow several books on magic. I owe my start to this patient."

Besides serving as Past Vice President of the Missouri State Medical Association, Milton D. has held many offices in mystic and magic organizations. For four years he was President of the "Mid-Missouri Mystics." He was President of "Ring 8" for two years; he organized "Ring 16" in Memphis, Tennessee, and has had many other honors bestowed upon him in this field. Most of our readers are familiar with his scholastic record, chuck-full of degrees attained and high scholastic honors won.

Mrs. Overholser assists with his shows, gives chalk-talks in their knotty white pine private theater, located in their basement. The stage measures 19 by 9 feet, with an audience seating capacity of seventy-five persons. His library contains 325 titles on magic, with a complete file of the *Sphinx*, official and best known publication in this field, started in 1902.

One of his favorite tricks involves the use of Jo Ann, a wooden duck. One day when introducing this talented member of his troupe to a high school audience, the roof almost fell in with laughter and yells. Dr. Overholser later found out one of the students actually had the name of Jo Ann Duck.

Obie's favorite tricks are all types of card magic, doll-house illusions, cut and restored rope tricks, and the vanishing bird cage trick.

Dr. Overholser was featured in the March 1942 issue of the International Brotherhood of Magicians Magazine, *The Missing Ring*. He also is a member of the Columbia Players, a theatrical group, and follows his bent toward things magic as a class A licentiate in radio work, having talked with fellow "hams" in New Zealand, South America, England and Tokyo.

Quite an illustrious, industrious colleague, Dr. Overholser.

(Our readers will help by writing us covering interesting hobbies of our colleagues. V. T. W.)

Capsule Clinics

Irving A. Wien, M.D.

• Low spinal anesthesia with cyclaine in 1,000 obstetrical cases resulted in a satisfactory effect. This anesthetic agent in 10 per cent glucose solution caused no unfavorable reactions. Torkelson, H. P., et al: West. J. Surg. **59** (October) 1951.

• Streptomycin administered parenterally cannot penetrate a thick walled abscess; however, it diffuses readily into the peritoneal cavity in higher concentrations than is found in the blood. Scullinger, R. N.: Surg. Clin. N. America **30** (April) 1950.

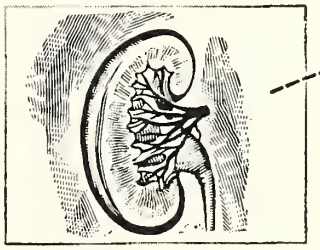
• Thoracolumbar sympathectomy is a palliative and not a curative type of therapy for essential hypertension. Advances in Medicine and Surgery, Graduate School of Medicine, University of Pennsylvania, W. B. Saunders Co., Philadelphia, 1952.

• Since hyperthyroidism can be controlled safely in patients not intolerant of antithyroid drugs, it does not seem reasonable to assume the needless risk of operation with severe or complicating hyperthyroidism without first controlling them. Crile, G., Jr.: Practical Aspects of Thyroid Disease, W. B. Saunders Co., Philadelphia, 1950.

• The average breast mass reaches a diameter of one and one half inches before it is spontaneously discovered, unless it is meticulously and scientifically felt for by the patient herself. Cameron, C. S.: Cancer News **6** (February) 1952.

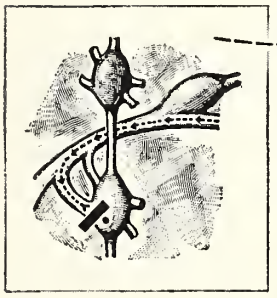
Regitine®

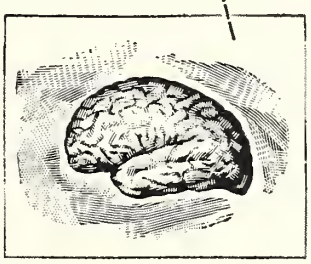
(phentolamine methanesulfonate Ciba), preferred in the diagnosis of pheochromocytoma, the cause of the most common form of hypertension of *known* etiology. The injection of this *adrenergic blocking agent* affords an accurate test that is relatively safe, and can be simply performed by any physician, unassisted, in his office.



three new agents in the control of hypertension

Complete information can be obtained by writing to the Medical Service Division, Ciba Pharmaceutical Products, Inc., Summit, New Jersey.





Apresoline®

hydrochloride (hydralazine hydrochloride Ciba), an agent of choice (for use) in the treatment of hypertension. This orally effective antihypertensive is believed to act *centrally* to produce a gradual, sustained decrease in blood pressure while increasing blood flow through the kidneys.

Esomid®

chloride (hexamethonium chloride Ciba), a potent oral hypotensive agent, may be particularly valuable in those patients with severe hypertension which has failed to respond to Apresoline. Esomid acts as a *ganglionic blocker,* inhibiting the transmission of impulses through all autonomic ganglia.

2/1907M

Ciba

Our Auxiliary

Mrs. Richard (Betty) Sutter, *President*

The charge is frequently levelled against the medical profession that it does not participate adequately in community activities, including fund raising drives. Your auxiliaries are doing what they can in their various communities to dispel notions of indifference to charitable and welfare causes, not only through direct contributions but also by furnishing workers for such agencies as Community Chest, Red Cross, Polio Foundation, Heart Drives, Tuberculosis Society, Cancer Society. Here are some of the ways county auxiliaries have been working with and for their Doctors to improve public opinion toward the profession through civic and philanthropic projects for and with other groups.

Mrs. Richard (Betty) Sutter

Boone County Auxiliary: Rummage sale held for benefit of Colored Nursery School, Columbia, building fund; curtains and toys donated at Christmas for this Nursery School; cod liver oil furnished for Community Nursery School; Occupational Therapy work contributed to the Children's Ward of the University Hospital.

Buchanan: Jellies and jams given to Noyes Orphanage every Christmas in St. Joseph, as well as gifts sent to Tuberculosis Hospital at Mount Vernon, and Thanx packages to soldiers in Korea. For several years Buchanan Auxiliary maintained a Loan Chest of hospital supplies and equipment, such as beds, wheel chairs, crutches, which it recently gave to the Organization of Public Health Nursing; donated fifty-six subscriptions of *Today's Health* magazine to local and county schools; arranged for A.M.A. transcription "High School Forum" to be used in all St. Joseph high schools.

Cape Girardeau: $50.00 Scholarship given to a student nurse this fall; $50.00 gifts to both St. Francis and Southeast Missouri Hospitals.

Cass: Raised $1,000.00 for Harrisonville Memorial Hospital by a food stand at the Annual Horse Show and a cake stand at the Old Settler's Reunion, $500.00 of which went toward an x-ray unit, the rest to hospital furnishings.

Cole: Conducted Home Nursing Courses for inmates of the Women's Prison, Jefferson City; contributed toys and jars of fruit and vegetables to the Community Nurse for her distribution to the needy in December; took care of three Cole County families at Christmas; maintain membership in Missouri Association for Social Welfare.

Cooper-Howard: Worked with the Red Cross Bloodmobile.

Dunklin: Served tea at the opening of the Dunklin County Memorial Hospital, acting as hostesses; Auxiliary itself gave $10.00 each to March of Dimes, Heart Fund, Tuberculosis, Cancer Drives.

Franklin: Arranged health program for American Association of University Women, Washington; set up continuing radio programs at Warrenton using A.M.A. transcriptions.

Greene: Gave $87.00 to the teachers of handcraft at the Polio Cottage at Burge Hospital, Springfield, to buy supplies, and are building up a film library for their ceiling projector; collected clothing for the Children's Home; gave a supper for the Boys' Citizens Club; gave $150.00 for a Student Nurse Scholarship.

Jackson: Bridge and Canasta Mixer raised $242.00 in 1952, spent for Health Education; $150.00 used to place *Today's Health* in beauty parlors, schools, libraries, hospitals and offices of government officials, $25.00 to the Jackson County Health Forum for free public lectures on health topics, with the balance used to send underprivileged children to summer camp. In November the Auxiliary registered all Jackson County doctors, dentists and nurses for Civil Defense; three Student Nurse Scholarship Loans in operation; Auxiliary maintains active representation on Boards of Children's Convalescent Center, Family Life Council, Jackson County Health Forum, Coordinated School Association, Kansas City Safety Council and Radio Council.

Jasper: Sent three girls to Y.W.C.A. camp last summer, sent $10.00 to each of three county institutions at Christmas; organized a crew of 150 volunteer workers which made a house to house canvass, including business establishments, of Joplin for blood donors, which enabled the Red Cross to meet its quota for the first time.

Jefferson: Work for Cancer Dressing Units; arranged health speaker for Business and Professional Womens Club of Festus-Crystal City.

Lafayette-Ray: Auxiliary member Mrs. W. E. Martin heads both Cancer Drive and Red Cross Bloodmobile.

Mineral Area: Auxiliary president, Mrs. G. L. Watkins, Sr., of Farmington is County Service Chairman of Red Cross Blood Bank.

Miller-Moniteau-Morgan: Through auxiliary member Mrs. W. L. Allee was able to secure a Miller County Nurse; auxiliary contributes to Cancer Drive, assists with Bloodmobiles in each county; set up health meeting for P.T.A.

Nodaway-Atchison-Gentry-Worth: Presented the Old Folks Home with jellies, jams and fruitcakes at Christmas; a member is Nurse Instructor for Atomic Warfare.

Ozarks Counties: Work with the Red Cross, the Mobile X-Ray Unit of the Tuberculosis Society, and are showing cancer film; have cooperated with Skaggs Memorial Hospital Auxiliary in Branson.

Perry: Assisted in the collection of blood for the Red Cross Mobile unit; a member is chairman of the Perry County Society for Crippled Children; members of the Auxiliary acted as hostesses at the open house week at the opening of the Memorial Hospital in Perryville; assisted with Career Day program at the Hospital; contributed to the hospital's Student Nurse Fund.

Pettis: Provided Christmas baskets for patients at Bothwell Hospital, Sedalia, who had no relatives to remember them; are working with the Federated Music Clubs to provide Hospital Musical Therapy through Mrs. E. F. Yancey, chairman and auxiliary member.

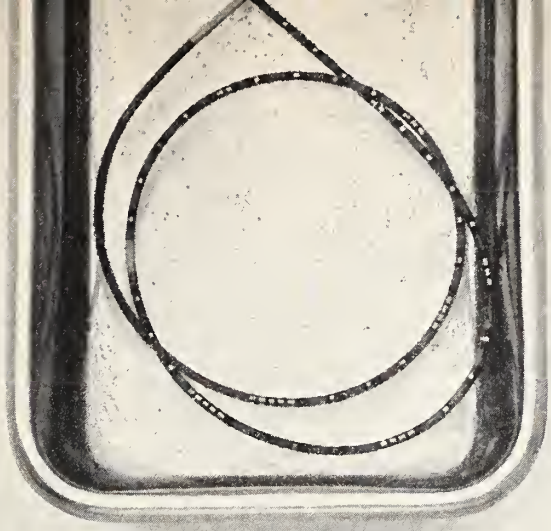
Phelps-Crawford-Dent-Pulaski: Auxiliary members, assisted by wives of Hospital Board of Trustees, organized a Hospital Auxiliary for the new Phelps County Memorial Hospital in Rolla, including representatives of all women's organization in the county.

St. Louis City: Direct auxiliary participation in Community Chest Drive, Red Cross, Better Films Council, women's division of the St. Louis City Infirmary, food and National Brotherhood Week; gave toilet articles to the women's division of the St. Louis City Infirmary, food and money to the Salvation Army at Christmas; provide a three year Student Nurse Scholarship annually.

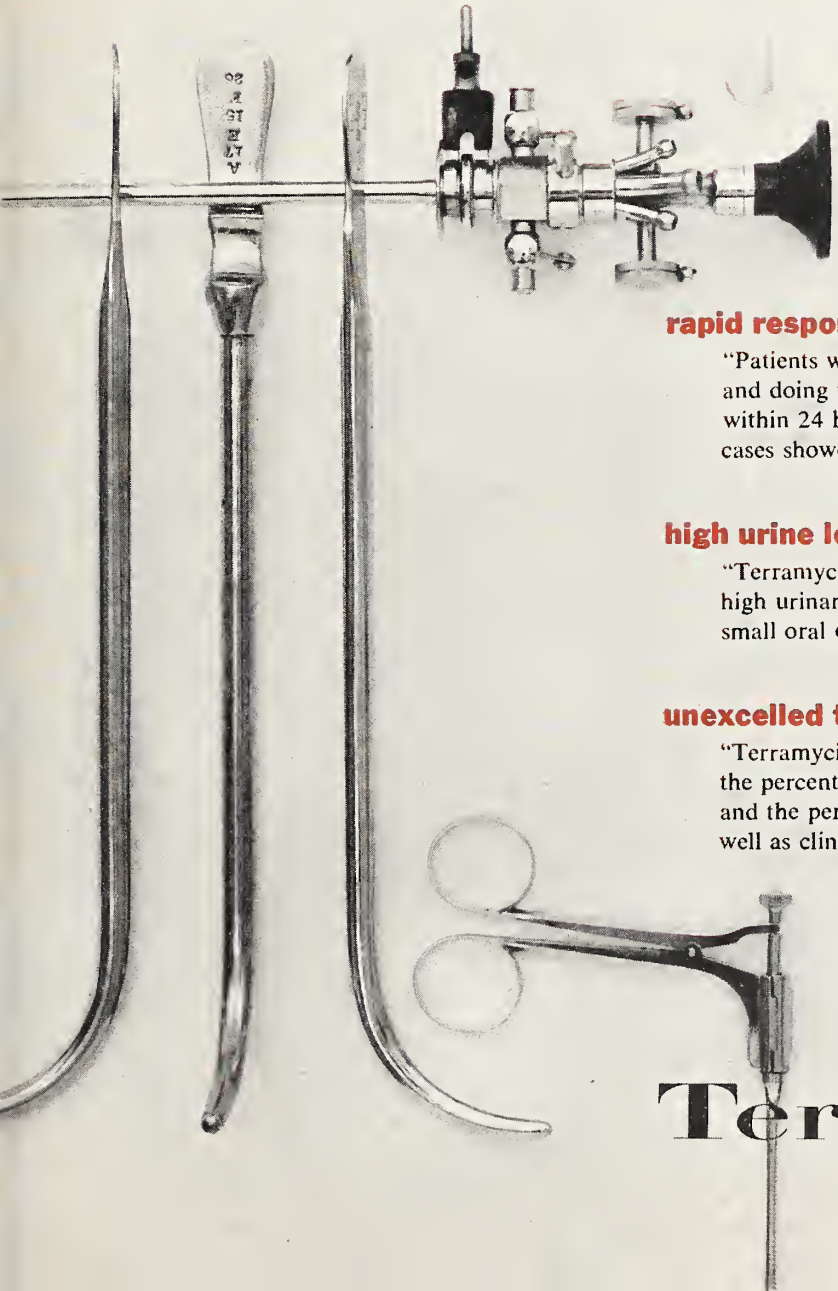
St. Louis County: Collected $1,000.00 in Community Chest campaign; provided health day speakers for Scottish Rite, Temple Club, P.T.A.; auxiliary member Mrs. Charles Shepherd, President of Better Films Council, arranged showing of R.K.O. film "Your Doctor" at first run theater; contributed to Missouri Boy's Town; direct representation in Tuberculosis Society and assisted with Mobile X-Ray unit throughout county; representative on Nurse Recruitment Committee of Social Planning Council; provide Christmas and Easter presents for children and old people at St. Louis County Hospital and are now making house slippers for patients; arranged weekly A.M.A. transcriptions over KXLW Clayton; raised two $400.00 Student Nurse Scholarships through rummage sale and theater party.

Saline: Sponsored Cancer Drive raising $500.00; auxiliary has voted to buy stock for the enlargement of Fitzgibbon Hospital at Marshall.

This is not meant to include all auxiliary participation in civic affairs, but does indicate the varied scope of benevolent activities the auxiliaries have assumed and the manner in which they are trying to cooperate with other organizations. These are some of the extra ways your auxiliary is serving the medical profession. Individual auxiliary members contribute a great deal more in community, state and national organizations as individuals.



IN URINARY TRACT INFECTIONS



rapid response

"Patients with pyelitis were well and doing their usual duties within 24 hours . . ."[1] ". . . resistant cases showed remarkable response."[2]

high urine levels

"Terramycin was selected . . . in view of high urinary excretion rate following small oral doses of the antibiotic."[1]

unexcelled toleration

"Terramycin is generally well tolerated, the percentage of relapses being low and the percentage of bacteriological as well as clinical cures high."[3]

1. Canad. M. A. J. 66:151 (Feb.) 1952.
2. J. Urol. 67:762 (May) 1952.
3. Ibid. 69:315 (Feb.) 1953.

Terramycin

Brand of Oxytetracycline

Pfizer

President's Comments

A recent editorial in the *Saturday Evening Post* quoted figures gathered for the Federal Reserve Board by the Survey Research Center of the University of Michigan. Because the figures obtained are so pertinent to criticisms made today, permission was asked to reprint from the editorial.

"Of about 53,000,000 families in the United States, almost 43,000,000 —over 80 per cent—reported no medical debts whatsoever. . . . One million families owed from $200 to $1,000, while another 200,000 owed more than $1,000. That would indicate that less than 3 per cent of all the people in the survey were in more or less serious trouble as the result of illness or an operation.

"The remaining 9,000,000 families were listed as in debt for medical expenses in amounts varying from $1.00 to $200. Unpaid bills are always bothersome but it would be interesting to have a comparable analysis of how much people owe corner grocers, department stores or finance companies.

"The point is, on the facts shown, 80 per cent of people surveyed have no medical debts at all, while another 17 per cent have medical debts that ought to be entirely manageable within the family budget. . . .

"The dark side of things is their specialty (advocates of socialized medicine), and the three per cent must be described as the norm in order to justify the infliction of another expensive bureaucracy on the suffering taxpayer. . . .

"This business of reversing any sensible approach to the relations of the people and their government was spotted long ago by Grover Cleveland. That sage remarked that it was the business of the people to support the Government and not of the Government to support the people."

J. William Thompson M.D.

Readers Review

UNRECOGNIZED PROSTATISM

Advanced bladder neck obstruction leading to uremia occasionally develops in presence of minimal symptoms. Patient may first be seen with gastrointestinal complaints, symptoms of anemia or the discovery of a suprapubic mass. Consideration of the possibility of urinary tract obstruction will usually result in establishment of the diagnosis. Sixteen cases observed suggest suprapubic trocar cystotomy along with gradual decompression of the bladder. After suitable improvement in patient's condition, prostatectomy by either suprapubic or transurethral route is advocated. J.A.M.A., March 15, 1952.

Have seen two cases of prostatic obstruction with presenting complaint of abdominal mass sent to us by the same sharp internist in the same week. Bladders held 42 and 46 ounces. Believe catheter drainage with use of antibiotics as good as, and less trouble than, cystotomy. Robert B. Bristow, M.D., Urology, *St. Joseph.*

A DANGER OF RADIOACTIVE IODINE

There is danger in giving radioactive iodine to mothers while they are breast feeding a baby. Enough of the radioactive material gets into the mother's milk to allow a sizable uptake of I-131 into the baby's thyroid gland. A therapeutic dose given to the mother would cause appreciable decreased function of the infant's thyroid and might even stop functioning of the gland completely. Nurnberger and Lipscomb, J.A.M.A., December 6, 1952.

This point is a good one, in my opinion. It has been discussed that during the first trimester of pregnancy radioactive iodine could be given to the mother without fear of damage to the fetus' thyroid. This is because the thyroid gland in the fetus does not begin to develop until about the fourth month. F. T. H'Doubler, Jr., M.D., Surgery, *Springfield.*

IRRADIATION FOR SOFT TISSUE SARCOMA

"Irradiation is of considerable value in the treatment of soft tissue sarcoma, and is an important modality in the treatment of this disease. The results of a combined radiological and surgical approach to this disease are better than surgery alone, however extensive the surgery." It is suggested that irradiation with moderate doses over long periods breaks the chromosomes, thus causing gene mutation and, in time, the cells become nonproductive. This subintensive irradiation may also produce chemical intracellular changes resulting in sterility of the malignant cells. Sir Stanford Cade, Proc. Roy. Soc. Med., vol. 44, p. 19-36.

In my experience radiotherapy for sarcomas of soft tissue origin has been most disheartening, except in the case of liposarcoma and hemangio-endothelioma which are often quite responsive to palliative irradiation. In the future perhaps better results may be obtained by more protracted fractionated irradiation as suggested by Cade. By so doing we not only may produce chemical intracellular change and break the chromosomes, but also take advantage of the decadence and recovery rate curves demonstrated by Mutscheller in 1941. Joseph Fisher, M.D., Radiology, *St. Joseph.*

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 April, 1953 Number 4

FIORINAL FOR SYMPTOMATIC TREATMENT OF NONVASCULAR HEADACHE

ROBERT E. RYAN, M.D.
ST. LOUIS

WITHIN THE LAST ten years several new preparations, which are useful in aborting headache attacks, have been presented to the medical profession and their patients. Most of these preparations, however, are useful only in the field of vascular headache problems. This is especially true in headache cases which have been diagnosed as migraine or histaminic cephalalgia. In 1945, Horton published results obtained with a new agent called D. H. E.-45.[1] Today, this product is still effective and useful in migraine and histaminic cephalalgia cases. Gynergen has been used for many years in the symptomatic treatment of migraine. In 1943, Horton and Ryan first reported on Cafergot, which is useful in aborting these two types of headache.[2] Various reports have been reported on other products dealing with vascular headaches, such as Octin,[3] and various rectal suppositories.[4, 5]

This shows that there has been extensive research in the field of headache for the last several years. However, it is all in the field of vascular headaches only. Comparatively little has been done in the field of nonvascular headache during this same period of time. The patient with nonvascular headache has always been given the ancient, old remedy of aspirin or, in extreme cases, aspirin and codeine. Many times these patients, knowing that their physicians will only pass their headache off as of minor importance, will merely go to their pharmacy and obtain their aspirin themselves and, thus, avoid the time and the expense of consulting their physician. Quite frequently, they do not obtain their desired relief and merely suffer with their headache attack until it wears off, and they have only another attack to look forward to in the future.

During the last two years, I have been using a new agent in treating these nonvascular headache problems; that is, in treating them symptomatically. This preparation is known as Fiorinal and only recently it has made its appearance on the open drug market.[6] I have found this preparation to be successful in giving symptomatic relief to the patient suffering from a headache of the nonvascular type.

Fiorinal is compounded in tablet form. It is composed of 50 mg. of Sandoptal (isobutylallyl barbituric acid), 200 mg. of acetylsalicylic acid, 130 mg. of acetophenetidin and 40 mg. of caffeine. This is made up as an uncoated tablet type of preparation.

Acetylsalicylic acid is an analgesic and antipyretic. It should not be overused as it can produce side effects as edema of the lips, tongue, eyelids, nose, or of the entire face. It may also produce an urticarial type of rash, vertigo and nausea. Some individuals are, of course, more susceptible to these side effects than are others; and these side effects are usually attributed to an idiosyncrasy. Its average dosage is from .3 to 1 gm. (5 to 15 grains) for adults, depending upon the size of the individual, his condition and general state.

Acetophenetidin is a valuable antipyretic and analgesic. Its average adult dosage varies, depending on the individual; and when combined with acetylsalicylic acid, it is usually in the neighborhood of 2 grains.

Caffeine is a nerve stimulant. It is also believed that caffeine is a central nervous system stimulant. Caffeine also can act as a diuretic and a cardiac stimulant.

Sandoptal (isobutylallyl barbituric acid) is a sedative of the barbital type, but differs from barbital in that both of the ethyl groups which are in barbital (pentobarbital) are replaced, one by an iso-butyl group and the other by an allyl group.

From this formula, one can see that it contains the same elements as Empirin compound with the addition of the Sandoptal, which is a sedative. Also, it resembles the preparation Emporal, with the addition of Caffeine.

Fiorinal was administered to patients suffering from various forms of nonvascular headache and these various forms and the results obtained will be discussed individually.

Sinus Headache.—Fiorinal was given to a series of sinus headache cases. This was done on an experimental basis and the results obtained with Fiorinal in sinus headache attacks were gratifying; and, by far, the most successful of all the various types of headache reported in this paper. The sinus condition in the majority of the cases

presented in this paper followed an acute head cold or upper respiratory condition and were of the acute sinusitis type. Sinus headache patients give a different type of history than patients suffering from migraine, myalgia, tension or histaminic cephalalgia. The sinusitis type of head pain is the result of either toxemia or a change in the intrasinus pressure. The headache of a patient suffering with sinusitis may also manifest a neuralgic type of pain.

The typical symptom of the sinusitis type of headache is a purulent type of nasal discharge, either unilateral or bilateral, depending on the sinuses involved. There is also nasal congestion and edema, and the nasal mucous membrane is usually inflamed. Depending upon the acuteness and the severity of the condition, there may be a temperature elevation, but it is usually of a mild nature. There will be positive x-ray findings in cases of sinusitis. The superficial soft tissue areas overlying the sinus or sinuses involved are often tender to touch. The pain is fairly constant and dull in nature. So far as the treatment of sinusitis is concerned, it may be either medical or surgical, depending on the individual case. Medical treatment of shrinkage and suction, along with the proper antibiotics, is helpful. Heat is also helpful in many cases. The analgesics are helpful in the symptomatic type of treatment of sinus headache.

TABLE 1. RESULTS OBTAINED WITH FIORINAL* IN VARIOUS TYPES OF HEADPAIN

Type of Headpain	*No. of Cases*	*Results* Excellent	Good	Poor
Sinusitis	52	31	15	6
Myalgia	26	2	4	20
External Otitis Media	21	15	4	2
Acute Otitis Media	32	20	8	4
Temporal-Mandibular Joint	2	0	0	2
Headpain in Acute Coryza	20	10	5	5
Total	153	78	36	39

* Fiorinal: 200 mg. acetylsalicylic acid; 130 mg. acetophenetidin; 40 mg. caffeine and 50 mg. Sandoptal (isobutyl-allyl-barbituric acid).

The relief afforded patients suffering from the sinus type of head pain was satisfactory when Fiorinal was used. The results obtained with Fiorinal in various types of head pain are presented in the accompanying table.

Furunculosis of the External Auditory Canal.—Several cases of this type were given Fiorinal in an attempt to relieve the pain associated with this condition. The pain experienced in this form of external otitis media is extremely severe and of a constant nature until the furuncle either ruptures spontaneously or recedes as a result of treatment. The pain is due to the excessive pressure exerted on the area involved and upon the nerve endings of the area involved. This type of pain is increased by the movements of the jaws such as takes place in chewing. This is due to the close anatomic relationship of the temporal-mandibular joint and the skin of the external auditory canal. When a person moves this joint, the skin in the outer portion of the external auditory canal is also moved.

Fiorinal served to temporarily alleviate the pain associated with this condition. The relief obtained would last for a few hours and then patients would have to repeat their dosage of Fiorinal.

Acute Otitis Media.—Several patients with acute otitis media were given Fiorinal, and the results were encouraging. Since the pain of acute otitis media is the type which should be helped to various degrees by the analgesic group of drugs, the results obtained with Fiorinal should have been expected as they are of a neuralgic type of disturbance.

The pain experienced in acute otitis media is also of a severe nature and of the sharp, stabbing, knife-like pain. This type of pain may be of a constant nature or it may be the intermittent, pulsating type with short periods of omissions. These patients welcome sleep and perhaps the sedative (Sandoptal) which is used in Fiorinal serves a useful purpose in these cases. It is not of sufficient strength to exert complete sedation, but it may be just strong enough to enable these patients to get a little rest which quite often they are unable to obtain because of the severe pain which they experience.

Head Pain Associated with Acute Coryza.—Quite frequently the patient suffering with an attack of acute coryza will experience headache. These headaches are usually of a dull nature, rather generalized throughout the entire head and more or less constant. They are usually of a mild nature and not of sufficient magnitude to keep the individual from performing his usual routine chores of the day. They are annoying, however, and when accompanied by the usual malaise, which is also seen in the average picture of acute coryza, will give the patient a generalized miserable feeling. Experimentally, I placed several of these patients on Fiorinal tablets and the results, as shown in table 1, were encouraging.

Patients with acute coryza not only obtained relief from their headaches but also from their general feeling of malaise. In these cases, the average patient was instructed to take one tablet, four or five times a day, and more often if required. They took this preparation in this manner for about three days duration.

Fiorinal was tried in several cases of myalgia of the head, but the results were not satisfactory as indicated by table 1. This type of head pain fits into the vascular field and, therefore, these results should have been expected.

This preparation also failed to give any relief to the patients diagnosed as suffering from temporal-mandibular joint syndrome.

The average dosage of Fiorinal which I have found to be most beneficial in the case of nonvascular headache, such as I have discussed here, is two tablets to be taken immediately and re-

peated every four hours when necessary. If the individual is of small stature or if the patient is a child, naturally, the dosage is proportionately smaller, depending upon the body weight.

As far as toxic side effects are concerned, the only complaints which I have received from the patients who received this preparation under my direction were an occasional vertigo or a mild sedative effect. In the cases reported in the table, only three patients complained of vertigo and this was of a very mild form, lasting only about ten minutes or so and which did not inconvenience them in the least.

The sedation effect of Fiorinal was more commonly found as a side reaction. However, this occurred in the patients of a smaller stature and was most probably due to their taking too strong a dosage of the preparation because, when their dosage was cut down, most of these side effects of sedation vanished. It should be pointed out, however, that by using the word, sedation, I do not mean that these patients were put to sleep. They merely felt a little drowsy and in many cases would take a short nap and wake up in an hour or so, free from their head pain. Many of these patients will welcome this sedation as quite often their pain will prevent them from sleeping normally. The relief from the pain is not permanent, however, and within three or four hours the effect of the Fiorinal wears off, and then they repeat their dosage of the drug.

The principal difference between Fiorinal and other analgesics is that the sedative, Sandoptal, has been added and the caffeine, which is a stimulant, has not been discarded. The addition of this sedative is basically sound as many investigators agree that a mild sedative often will constitute a valuable feature of the therapeutic approach to a headache problem. It is desired in all headache problems to quiet the excessive excitability of the central nervous system and the reflex irritability which are involved in the mechanisms by which certain types of headache can be precipitated. Sedatives will tend to diminish the involuntary tonic contractions of skeletal muscle. Caffeine, on the other hand, may increase these tonic contractions of skeletal muscle. Thus, the two preparations together will tend to balance the scale in this respect.

A sedative added to the analgesic, as in Fiorinal, will tend to decrease the hyperirritability which is so often present in headache problems, such as the neuralgic type found in sinusitis. Certainly, there is no reason why a mild sedative would be contraindicated in most of these cases. The average patient with head pain, presuming that the pain is of severe enough character, is usually emotionally upset, at least to a slight degree. The sedative should act against this emotional upset and thus aid in the treatment program. This should, therefore, be an advantage over most other analgesics which do not contain the sedative.

Of course, Fiorinal is only of use as a symptomatic form of treatment in these types of head pain. While giving the patient this preparation to abort the head pain attack, the proper procedures used to combat the condition causing the head pain should also be employed. This will vary with each condition, but is probably the most important part of the treatment, because, unless the underlying cause is corrected, the pain will continue to occur after the effect of the Fiorinal has worn off.

From the results presented in the accompanying table, it may be concluded that Fiorinal is of benefit in the pain experienced in cases of nasal sinusitis and acute otitis media, furunculosis of the external auditory canal and the head pain associated with the common cold. Certainly, further work along these lines is justifiable. The results reported in this paper are only of a preliminary nature and a further study of the merits of Fiorinal in sinusitis head pain is needed. Since Fiorinal is an analgesic, it would be expected to be of benefit in these types of head pain because they are of a neuralgic nature, and analgesics are helpful in the neuralgia type of pain.

Just how valuable Fiorinal will prove to be in the headache field remains to be seen in the future, after further investigative research has been done. The results shown in this paper indicate that further research is justifiable and that perhaps Fiorinal will be a helpful agent in the symptomatic treatment of the neuralgic types of head pain.

3720 Washington Ave.

BIBLIOGRAPHY

1. Horton, B. T.; Peters, G. T., and Blumenthal, L. S.: A New Product for the Treatment of Migraine: A Preliminary Report, Proc. Staff Meet. Mayo Clin. **20**:241, 1945.
2. Horton, B. T.; Ryan, R. E., and Reynolds, J.: Clinical Observations on the Use of E. C.-10, a New Agent for the Treatment of Headaches, Proc. Staff Meet. Mayo Clin. **5**:105-108, 1948.
3. Peters, G. T., and Zeller, W. W.: Evaluation of a New Agent for the Treatment of Vasodilating Headaches. Proc. Staff Meet. Mayo Clin. **24**:565-568, 1949.
4. Ryan, R. E.: Treatment of Headache, J. Missouri M. A. **48**:106-108 (February) 1951.
5. Ryan, R. E.: Migraine and Histaminic Cephalalgia: A New Agent for Their Treatment, J. Missouri M. A. **48**:963 (December) 1951.
6. Ryan, R. E.: Symptomatic Treatment of Headache—A New Agent, Med. Times (May) 1952.

Teachers Who Teach?

In heavily populated areas, particularly in the eastern part of our continent, the general practitioners may not be required to carry out emergency surgical procedures but in many sections it is their responsibility and theirs alone to take care of many acute surgical emergencies. It is our function, therefore, to see that they are efficiently trained.

Surgical teachers have been chosen in many instances because of their research ability or their ability as clinicians, not often because of their ability as teachers. Is it not time we appointed teachers on the basis of their ability to teach?—WALTER MACKENZIE, December, 1952, *Surg. Gynec. & Obst.*

CARCINOMA OF THE CERVIX

THE ROLE OF IRRADIATION

WM. E. ALLEN, JR., M.D.
ST. LOUIS

IRRADIATION THERAPY remains the basic method for the treatment of carcinoma of the cervix in spite of the sometimes controversial differences of opinion between the advocates of surgery and irradiation.[15] This method is used throughout most of the medical world.[11, 13] Quoting a report published by Heyman and his associates in 1949, Reeves[13] states that of 32,293 patients with this disease from twenty-four centers in eight countries, 91 per cent or 30,299 received irradiation therapy.

Between 1937 and 1952 there were 753 cases diagnosed as carcinoma of the cervix at Homer G. Phillips Hospital. Some of these cases were not verified by biopsy, some were terminal and beyond the benefits of any type of therapy, others were post radiation recurrences for whom additional irradiation was deemed inadvisable and a few refused irradiation. However, of this total 310 or 42 per cent received some type of irradiation therapy and in 250 the complete series was given.

THE ROLE OF IRRADIATION

Some of the criticism directed against irradiation can be attributed to a misunderstanding of the role it plays in the treatment of carcinoma of the cervix which may be palliative or curative.

A surgeon cannot be expected to cure every case of malignancy he operates upon, nor can the radiologist be expected to completely arrest every case he irradiates. When there is no hope for complete arrest and palliation is the goal sought, irradiation probably stands foremost in prolonging the lives of these patients and making this prolongation as comfortable and as free from pain and discomfort as possible. Palliation may temporarily discourage the growth of a tumor, stop hemorrhage, cause a decrease or cessation of discharge, cause masses to regress and ulcers to heal. Remissions may occur for extended periods.

To cure means to completely arrest the disease permanently. Most radiologists, however, agree with Lenz[8] in that the term cure in connection with cancer is unfortunate as it expresses an opinion which later may prove to have been wrong. The term radiocurability as he uses it means freedom from clinical evidence of cancer for at least five years and to him this seems justified as it pertains only to the fact that during this period evidence of cancer did not reappear clinically.

Unfortunately practically every radiologist or surgeon who has done cancer therapy for a number of years has had the unhappy experience of seeing recurrences twelve or more years after what was considered adequate treatment.

In curative irradiation therapy it is well to keep in mind that irradiation like surgery is local in its effect and has no influence on distant cancer or even adjacent cancer beyond the field of effective radiation. In surgery for cure, all of the cancer, the primary lesion and its extensions, must be removed; likewise in irradiation not only must the primary lesions and its extensions be treated but every single cell in this mass of tissue must be given a lethal tumor dose.[12] Inadequate irradiation or inadequate surgery will result in recurrences and failure. Maximum quantity of radiant energy compatible with maintenance of tissue integrity must be administered to all neoplastic territory.[11]

The basis for irradiation therapy depends upon the difference in the response of normal and malignant cells to a given amount of radiation. Success or failure in many instances is determined by knowledge of radiobiology and the correct application of those laws of physics and biology which are concerned with the therapeutic use of radiant energy. Among other things it must be remembered that cells of a given tissue respond differently to different times, quantities and, sometimes, qualities of radiation; that cells may be variably sensitive to equal doses of radiation. The most radiosensitive cells are those which are rapidly growing. A cell is most radiosensitive during mitosis and the more embryonal and undifferentiated the cells of a given block of tissue are, the more sensitive they are to irradiation. Radioresistance increases as cells become better differentiated.

MECHANISM OF RADIATION

Full appreciation of the role irradiation plays in the treatment of cervical carcinoma cannot be obtained without some understanding of the mechanism of radiation. Warren[18] emphasizes the fact that it is the radiant energy absorbed by the tissue or cell that is effective, not merely that which is delivered to it. Pack[11] also states that the lethal action of irradiation on the cell is due to the absorbed energy which results from the impact of the gamma or roentgen rays upon the atom and the release of electrons inside the cell. He further states that the sequence of events in the cell seems to be triple: (1) ionization, (2) chemical and (3) biologic. The initiation of the process leading to the death of the cell is started by the transfer of energy from the beam of radiation to the matter of the cells. Quoting Warren[18] again, all types of ionizing radiations, the x-ray, gamma ray, alpha particle, beta particle and the neutron, have essentially the same qualitative effects on cells exposed.

The first noticeable effect on cells is interference with mitosis, both a decrease in mitotic activity and the appearance of abnormalities in the chromosomes. This is followed closely by swelling of the cytoplasm and the formation of vacuoles.

Director, Department of Radiology and Director, The Tumor Clinics, Homer G. Phillips Hospital, St. Louis.

Delivered as part of a symposium on two years activity of the Gynecological Section of the Tumor Clinics at the Quarterly Tumor Conference, July 28, 1952.

Later pyknosis and autolysis of the damaged cells take place. Occasionally macrophages may pick up dead cells or their fragments, but usually there is but little polymorphonuclear leukocytic infiltration of the irradiated tissue. After the usual dose of radiation there is partial or complete recovery of some of the cancer cells and were it not for the concomitant effects produced on the connective tissue stroma and blood vessels, no lasting effect on a treated area would be obtained.

METHOD OF TREATING

A combination of x-radiation and gamma radiation is usually used in irradiating carcinoma of the cervix. Except in the unusual cases, external x-radiation should precede the local intravaginal application of radium or radon as advised by Kaplan.[7] In his opinion external x-ray therapy is extremely effective in controlling pelvic involvement, relieves secondary infection, controls bleeding, often appreciably reduces the extent of the local lesion and permits partial recuperation of the patient so that radium therapy can be tolerated better. The x-rays also attack cancer along the pelvic wall, pelvic lymph nodes and uterus.

Following external x-radiation, intravaginal irradiation is given. The radiation may be by means of radium or radon applicators or transvaginal x-radiation. If x-radiation is to be used I prefer the high voltage to the lower voltages. High voltage, 200 KV, has the advantage of permitting a greater tissue dose to the parametrium where it is difficult to deliver adequate doses and from which recurrences frequently occur. By careful angulation and dosage control, tissue tolerances of adjacent viscera are not exceeded and untoward sequelae or complications are seldom seen.

If gamma ray radiation is planned, either radium or radon may be used. Both derive their gamma radiation from radium C with practically the same biologic effect. There is a difference, however, in figuring their doses.

Each case must be individualized, the irradiation being planned and outlined according to the size of the primary lesion, its depth beneath the surfaces, its probable extensions, the size and condition of the patient and, to a certain extent, the type of the lesion. Not all tumors of a given type respond alike but a sufficient degree of constancy prevails to permit proper treatment planning.[18] The object of the planning is to deliver a tumor lethal dose to every cancer cell within the optimum time interval. The radium tumor dose is dependent upon the tumor dose received from external x-radiation and is used to bring the total tumor dose to a cancerocidal level.

Division of radiotherapy between departments is not advised except in those instances in which there is close cooperation and mutual planning from the initial treatment to the end of the procedures. The physician outlining a scheme of treatment must be skilled in the use of both x-rays and radium. In no other way can these two complementary sources of radiation be properly integrated and the area of effectiveness of each fully utilized for the benefit of the patient.

DOSAGE

The dose sought and the dose given should be the tumor dose. Hutchinson[6] states that knowledge of the dose at every point throughout the treated block of tissue is the basis for any rational scheme of therapy. His paper reviewed data and methods for assessing such dosage. Although possible, it is impracticable in the usual busy radiotherapy department to figure the dosage received at every point in the irradiated area. At Homer G. Phillips Hospital the doses are figured at two points: point A, the cervix dose, a point 1.0 cm. lateral to the midline at the external os and, point B, the parametrial dose, a point 3.5 cm. proximal to external os and 3.0 cm. lateral to midline.

DOSAGE TERMINOLOGY

The dose should be given in roentgens, roentgens x-ray or roentgens gamma. It can also be given in biologic equivalents or tissue erythema doses. One of the latter two must be used when total doses are to be determined. Roentgens, x-rays and roentgens gamma cannot be added but when reduced to a common denominator like tissue erythema doses (TED) their totals can be ascertained quickly.

In gamma ray dosage, the terms milligram hours or millicurie hours should not be used unless these terms are qualified by a statement of the distance factors, the filtration, the arrangement of the sources and the volume of tissue irradiated. Holmes and Shulz[5] consider them meaningless for clinical therapy. Paterson[12] states that in radium therapy that dosage in terms of milligram hours or of millicuries destroyed is meaningless and can no longer be justified.

The following biologic equivalents have been found sufficiently accurate for adding in the determination of total tumor doses:

A. 1.6 gamma roentgens equals 1 x-ray roentgen (HVL 1.6 mm. cm.).[9]

B. 1,000 gamma roentgens (3 hrs.) or 680 x-ray roentgens (HVL 2.0 mm. cm.) equals 1 tissue erythema dose (TED).[2, 14, 16]

C. 1,500 gamma roentgens (90 hrs.) or 600 x-ray roentgens (HVL 2.3 mm. cm.) equal 1 tissue erythema dose (TED).

The last (C) are the factors used at the Homer G. Phillips and Peoples hospitals.

Adequate dosage is that which is sufficient to properly sterilize the neoplasm without doing irreparable damage to the surrounding healthy tissue. Inadequate dosage not only fails to destroy the cancer, it also renders it radioresistant so that future cancerocidal dosage cannot be given. It is our practice to figure total doses at points A and B in tissue erythema doses, attempting to deliver a

minimum of 10 TED to every part of the irradiated tissue and not exceeding a maximum of 15 TED at any point, as advised by Arneson.[1]

In delivering these tumor doses the factors of wave length, time and the tolerance of normal structures in the field of irradiation are vital.

WAVE LENGTH

The wave length must be short with x-rays sufficiently penetrating to reach the tumor deep in the tissues; 200 KV is the minimum that should be used. Surprising as it may seem, from 2,000 to 4,000 KV with their increased depth doses have not given the significantly improved clinical results over 200 KV that theoretically would be expected. The 10,000 to 70,000 KV x-rays are limited in their usefulness by their high exit doses. We use 200 KV, constant potential with a filter which gives a half value layer of 2.3 mm. cm. In treatment planning, skin tolerances are frequently approached but severe skin reactions are avoided and seldom seen because of the heavy filtration.

There is some difference of opinion among radiologists as to what may be considered the optimum period of time over which total treatment should be given. It is generally agreed however that the adequate lethal dose must be delivered over a sufficient period of time in order to properly affect all the neoplastic cells as they pass through the period of mitosis; yet it must not be unduly prolonged because longer treatment periods not only require larger doses to produce the same effect but tend to increase cell resistance. For example, Martin[10] states that the following are required to give 1 TED in gamma ray therapy: 1,000 roentgens gamma, 3 hours; 1,333 roentgens gamma, 24 hours; 1,666 roentgens gamma, 96 hours, and 1,866 roentgens gamma, 186 hours, or with x-ray therapy Paterson[12] found the estimated tumor lethal dose for squamous carcinoma for tumors of small or moderate size to vary with the time required to give the dose as follows: one day, 2,000 roentgens; four days, 4,000 roentgens; eighteen days, 5,500 roentgens; thirty-two days, 6,000 roentgens, and ten weeks, 10,000 roentgens.

THE TUMOR BED

The destruction of carcinoma of the cervix by radiation not only depends on the delivering of adequate dosage within optimum treatment times, but also upon the little understood effects of the tumor bed upon the neoplasm. In efforts to deliver adequate dosage, care must be exercised not to exceed tissue tolerances or to destroy the integrity of the bed. Arneson[2] considers doses in excess of 15 TED to have an adverse effect on tumor arrest because of the destructive effect upon the tumor bed. Destruction of the bed by radiation can permit unrestrained growth of cancer due to removal of all the normal inhibitory mechanisms. Reeves[13] also states that if the dose exceeds the limits of tissue tolerance, not only will damage occur to normal tissues but the control of the cancer itself will not be so effective. This is the supralethal effect which is probably due to an adverse effect on the tumor bed. In fact overtreatment with its untoward sequelae and complications is frequently worse than undertreatment with recurrence. In neither instance is the cancer controlled and, in the former, the patient's condition may actually be made worse.

Friedman[3] gives the following tissue tolerances: rectum, 1,000 roentgens maximum; uterine cavity, 20,000 to 30,000 roentgens maximum, and vaginal mucosa, 10,000 roentgens maximum.

Sudholt[17] estimates that 8,000 roentgens is the maximum the urinary bladder can tolerate.

SUMMARY

1. Radiation is still the treatment of choice for carcinoma of the cervix.

2. Radiation may be either palliative or curative.

3. Successful radiation therapy requires a knowledge of radiobiology, physics and the technic of both x-ray and radium therapy.

4. Good radiotherapy requires proper planning and integration of all sources of radiation.

5. The tumor dose must be determined and given in roentgens, tissue erythema doses or biologic equivalents.

6. Overtreatment can be worse than undertreatment.

2601 N. Whittier St.

BIBLIOGRAPHY

1. Arneson, A. N.: The Distribution of Radiation Within the Average Female Pelvis for Different Methods of Applying Radium to the Cervix, Radiology **27**:1-20 (July) 1936.
2. Arneson, A. N.: Clinical Diagnosis of Carcinoma of the Cervix, Radiology **49**:400-402 (October) 1947.
3. Friedman, M. M.: A Manual of Radiotherapy, Ann Arbor, Edwards Brothers Inc., 1943.
4. Glaser, O.; Quimby, E. H.; Taylor, L. S., and Weatherwax, J. L.: Physical Foundations of Radiology, 2nd ed., New York, Paul B. Hoeber, Inc., 1952.
5. Holmes, G. W., and Schulz, M. D.: Therapeutic Radiology, Philadelphia, Lea and Febiger, 1950.
6. Hutchinson, F.: The Determination of Tissue Dosage, Radiology **57**:234-239 (August) 1951.
7. Kaplan, I. I.: The Bellevue Method for the Treatment of Carcinoma of the Cervix, Med. Rec., June, 1949.
8. Lenz, M.: Radiocurability of Cancer, Am. J. Roentgenol. **67**:428-442 (March) 1952.
9. Lindsay, D. D.: The Organization of the Computor System of X-ray Case Planning at the Lincolnshire Radiotherapy Center, Radiology **58**:850-862 (June) 1952.
10. Martin, C. L.: The Time Factor in Radiation Therapy, Am. J. Roentgenol. **59**:1-8 (January) 1948.
11. Pack, G. T.: The Principles Governing the Radiation Therapy of Cancer, Am. J. Roentgenol. **36**:233-244 (August) 1936.
12. Paterson, R.: The Treatment of Malignant Disease by Radium and X-Rays, Baltimore, The Williams and Wilkins Co., 1948.
13. Reeves, J. D.: Medical Progress, Radiation Therapy of Carcinoma of the Cervix, New England J. Med. **246**:652-661 (April 24) 1952.
14. Robertson, J. K.: Radiology Physics, 2nd ed., Toronto, D. Van Nostrond Co., Inc., 1948.
15. Schmetz, H. E.; Towne, J. E., and Smith, C. J.: Role of Surgery in the Management of Cervical Carcinoma, Radiology **57**:826-831 (December) 1951.
16. Sharp, G. S., and Spickerman, H. D.: Cancer of the Tongue, Am. J. Roentgenol. **57**:181-197 (February) 1947.
17. Sudholt, A. F.: Vaginal Applicators in the Treatment of Carcinoma of the Cervix, J. Missouri M.A. **49**:29-31 (January) 1952.
18. Warren, S.: Mechanism of Radiation Effects against Malignant Tumors, J.A.M.A. **133**:462-463 (Feb. 15) 1947.

THE USE OF RADIOACTIVE IODINE IN THE DIAGNOSIS AND TREATMENT OF HYPERTHYROIDISM

ROBERT E. MACK, M.D.
ST. LOUIS

SINCE THE ADVENT of the atomic pile with the resultant availability[1] of pile produced radioactive iodine, investigation of thyroid metabolism has progressed by leaps and bounds. Concomitant with this rapid extension of knowledge has been the change in attitude toward the therapy of hyperthyroidism, a better understanding of what might be expected from the various forms of therapy and the introduction of a new and almost totally effective form of therapy. It is well to realize, however, that since the etiology of hyperthyroidism is not known, therapeutic approach is directed against the main target organ of the disease, the thyroid, rather than against the specific cause. Because the diagnostic tests of thyroid function utilizing radioiodine are a measure of iodine metabolism, it seems only proper to introduce the discussion with a brief survey of iodine and thyroid metabolism and how they are affected by the various antithyroid drugs.[2]

The preliminary step involved in thyroid hormone manufacture is the transferral of serum iodine to thyroidal iodide and its transformation into iodine for synthesis into thyroxine.[3] Since many tissues have been shown to have the ability to manufacture thyroid hormone if sufficient iodine is present,[4] then that which sets the thyroid gland apart from other tissues is its ability to concentrate iodine. A more precise definition of this concentrating ability is expressed by the thyroid-blood iodide ratio.[5] In normal animals, such as the rat, this ratio is about 25 to 1. It can be increased by the administration of thyrotropic hormone and diminished by hypophysectomy.[6] If potassium thiocyanate is introduced, this ratio is rapidly brought to 1 to 1[5] and thus thiocyanate acts as an effective inhibitor of the iodine concentrating mechanism.

The next step to be accomplished is to transform the iodide taken up by the thyroid gland to iodine for its introduction into the tyrosine molecule. This is thought to take place under the influence of an oxidative process and a peroxidase system has been described[7, 8] although this evidence is disputed.[9] Once di-iodotyrosine is formed, two molecules of it combine to form thyroxine through an oxidative coupling with the elimination of one side chain. From here thyroxine is transferred to the colloid of the gland in the form of thyroglobulin for storage, or it is secreted directly into the blood stream. Thyroxine is released from thyroglobulin by a process of proteolysis[10] under the influence of thyrotropic hormone.[11]

From the Department of Internal Medicine and the Radioisotope Laboratory, St. Louis University School of Medicine, St. Louis, Mo.

When drugs of the thiourea group such as thiouracil or propylthiouracil are introduced, the manufacture of thyroid hormone is prevented. The essential feature of this effect is the blocking of the organic binding of iodine to tyrosine.[12] The exact mechanism is not known, but it may be that the thioureas act to inhibit oxidation, possibly of a peroxidase system,[13] if this is actually the system for iodide conversion. Organic binding resumes within a matter of a few hours after a single dose of the drug. If the drug administration is continued long enough so as to induce a decrease in the circulating thyroid hormone, the pituitary will be stimulated to release more thyrotropin.[14] This thyrotropin will in turn stimulate the thyroid gland to gross hyperplasia and will increase its ability to concentrate iodine.[5] However this iodine is in an inorganic form and cannot be utilized to form thyroid hormone.[15]

The means by which the rate of thyroid hormone manufacture is controlled is obscure, but is most certainly mediated by the pituitary. The evidence for this statement is the familiar effects of minimal thyroid function following hypophysectomy and conversely increased thyroid activity following the administration of pituitary extracts.[16] That fundamental control of the thyrotropin output may rest in the hypothalamus is suggested by the observation that thyroxine labelled with radioiodine can be localized there.[17] Recent experiments indicate that the pituitary may secrete two factors, a growth factor which is able to increase thyroid cell size and a metabolic factor which controls iodine metabolism.[18] The growth factor is dependent upon direct contiguity with the hypothalamus for its secretion while the metabolic factor appears to be independent of hypothalamic connection.

The explanation of the well known effect of iodine in pharmacologic amounts, in certain cases of hyperthyroidism, is not well understood although its effect is mediated through interruption of organic binding of iodine to tyrosine as does thiouracil.[19] It is apparently related to the amount of iodine contained in the thyroid gland and not the amount circulating in the blood stream.[20] For instance, rats maintained on low iodine diets require considerably less iodine to cause inhibition than do rats on a higher iodine intake and presumably with a lower thyroid-blood iodide ratio. Further, if a blocking dose of iodine is injected into a rat so that organic binding stops, the further introduction of potassium thiocyanate, which reduces the thyroid-blood iodide ratio to 1 to 1, will be promptly followed by the resumption of organic binding. It has long been observed that iodine has an involuting action upon the hyperactive thyroid gland[21] and, it is further postulated, that iodine may interfere with the action of thyrotropin on the thyroid gland.[22]

Following the isolation of thyroglobulin it was felt that this was the circulating hormone, but

careful studies showed that thyroglobulin appeared in the blood stream only after rather drastic surgical procedures on the thyroid gland.[23] Further investigation of plasma iodine showed it to be concentrated in the circulating protein moiety. The hormonal activity could be removed in butyl alcohol extracts and further separation revealed two compartments, one diiodotyrosine-like and the other thyroxine-like.[24] The bulk of the iodine seems to be concentrated in the thyroxine-like fraction. In a recent study utilizing the blood of hyperthyroid individuals after radioiodine therapy, analysis by chromatographic methods revealed all labelled organic iodine in the plasma to exist as a single substance indistinguishable from thyroxine.[25] Other investigations of plasma following the administration of radioiodine have shown an early localization of the iodine in the albumin fraction. This localization is nonhormonal. There then follows a progressive shift of activity to the alpha globulin fraction as labelled hormone is released by the thyroid gland. The rate of this shift is increased in hyperthyroid individuals.[26]

The exact mechanism by which thyroxine exerts its effect on tissue is not known although it is apparent that tissue metabolism is controlled through regulation of enzymatic activities. It has been suggested that its activity could be exerted either as a sort of co-enzyme or indirectly through the release of some metabolically active substance. Because of the minute amounts of thyroxine available to various tissues, some have felt it unlikely that thyroxine could participate directly with each of several enzyme systems.[27] However, some recent experimental work demonstrates a direct participation of thyroxine in two enzymatic mechanisms and suggests that it may act as a mediator between substrates or co-enzymes and cytochrome c, aiding not only oxidations but phosphorylations as well.[28]

Following this brief review of the metabolism of thyroid hormone, it seems proper to turn attention to the tests of thyroid function utilizing radioiodine. There are many different types of determinations in common clinical use and this variety serves to emphasize the lack of a completely satisfactory method.[6, 29, 30] In general, there are three approaches to the problem, each having its individual variations. The first of these is the measurement of urinary excretion either totally or fractionally for a period of a few days following a tracer dose. This method is now being used in routine clinical testing either alone or in conjunction with other measurements. Since the majority of the administered dose which is not utilized by thyroid is excreted in the urine, this then serves as an indirect assay of thyroid uptake. Hyperthyroid individuals excrete less than a normal amount although there is some overlap between euthyroid and hyperthyroid patients. One objection to this method is in patients with coexistant cardiac failure in whom the urinary excretion is falsely low because of a longer elimination period. The chief technical difficulty with this test is to be sure of patient cooperation since even the loss of a small portion of the sample through patient oversight might significantly alter the results.

The second type of approach is that utilizing measurements directly over the thyroid gland to determine directly the amount contained by the gland. The chief variation in this type of procedure is in the time of measurement and the distance of the detector from the neck. Hyperthyroidism is indicated by an uptake of more than 50 per cent. There are a few cases in which overlapping appears between euthyroidism and hyperthyroidism occurring chiefly at levels between 40 per cent and 50 per cent. This overlapping represents one objection to the direct uptake methods.

The third approach is the measurement of radioactivity in various serum compartments and comparison to each other or to some standard. This method has attracted little attention as yet except for research studies.

Because tracer studies are a measure of the functional capacity of the thyroid gland to take up iodine, they must be interpreted in the light of the clinical status of the patient. The possibility of previous drug therapy cannot be ignored when one finds an uptake value not in keeping with the clinical estimate of the patient. Iodine medication effectively prevents the uptake of radioactive iodine in any patient. The length of time which has to elapse following drug withdrawal and before uptake determinations reach their normal level for that individual seems to depend upon the clinical status. For instance in the euthyroid patient receiving iodine, as long as ten weeks may elapse before the test gives an accurate result although the average would be around six weeks. In the hyperthyroid receiving iodine this is a different matter, uptakes sometimes being observed in the hyperthyroid range as early as twelve to fourteen days following cessation of iodine therapy.[31] In one case of hyperthyroidism, it was observed that the uptake was 33 per cent after three weeks of medication but had increased to over 60 per cent in another three weeks. Another source of iodine which must be considered is in the dyes used in radiology, particularly priodax which may interfere with iodine uptakes for as long as eight months.[32]

Thyroid administration diminishes the uptake value, the effect apparently being mediated through a decrease in thyrotropic stimulation as a result of the presence of the administered hormone. After thyroid medication is stopped, a variable length of time is required for thyroid function to return to normal depending upon the dosage and the length of time the medication is given. To further attest to the nature of the uptake inhibition produced by the thyroid is the demonstration that these individuals can be shown to increase

their uptakes following injection of thyrotropin even while the thyroid is being given.[33]

The effect of the thioureas vary depending upon the time relationships between medication and the uptake determination.[29, 30] In hyperthyroidism treated with thiouracil, the uptake tends to be slightly less on therapy then after a few days or weeks following cessation of the drug. This effect is more pronounced in euthyroid individuals receiving thiouracil in which uptake is definitely depressed during medication but changes to a hyperthyroid range several days after the drug is stopped. This mechanism of increasing uptake has been utilized in treating cancer of the thyroid with radioiodine and in treating angina pectoris with this isotope by affording a means of increasing the concentration in the thyroid of a therapeutic dose of radioiodine.[34]

In the final analysis, the proper interpretation of the results of testing thyroid function with radioiodine rests upon accurate knowledge of the past history of the patient and of any medication he may be taking or has taken in the recent past. When the results of the test do not agree with the clinical impression, careful search should be made for those factors which might alter the functional physiology of the thyroid gland and concomitantly the values obtained for the level of iodine activity.

The exact etiology of hyperthyroidism is not known. Although the disease state may properly be thought of as hyperthyroxinosis, more signs and symptoms can be induced by the administration of thyrotropic hormone. In only a few cases can a definite precipitating factor be established, usually in the nature of severe psychic trauma. In this instance the relationship is thought to be through stimulus of the hypophysis which in turn causes increased amounts of thyrotropic hormone to be released. The increased incidence of the disease seen in females in association with puberty, pregnancy and menopause is suggestive of a similar relationship. Knowledge about diets is poorly developed and one cannot at the present time adequately evaluate the effect of dietary goitrogens. The matter of iodine deficiency as possible etiologic factor deserves serious attention. Studies of goiters produced by iodine deficient diets have shown a definite train of events beginning with a diminution of the production of thyroid hormone.[35] As this occurs, more and more stored hormone is removed from the colloid of the thyroid gland. When this source is exhausted, the serum protein-bound iodine begins to fall. Concomitant with this event is a gradual increase of the size of the thyroid gland under the influence of thyrotropic stimulation. The early effects of this stimulation are hypertrophy and hyperplasia but, later, adenomas develop which may become thyrotoxic or malignant.[36]

Without knowledge of a specific etiology, therapeutically one must turn attention to the thyroid gland. The first approach to be discussed is with drug therapy. As a matter of fact, the therapy of hyperthyroidism has undergone radical change since the introduction of the thiourea compounds.[37] Although iodine has been useful, these drugs gave the first really effective medical approach to therapy. The commonly used forms are thiouracil, propylthiouracil and methimazole (tapazole). They all have the ability to interrupt completely the organic binding of iodine. The gross effect of these drugs is enlargement and softening while microscopically they produce hyperplasia with decreased amounts of colloid.[38] Control of symptons is fairly prompt but, since medication is continuous, protracted care is required.[39] Because of the occasional case of drug toxicity which is encountered, close medical supervision of patients receiving these drugs is required. Their effectiveness has earned them a secure position in the preoperative care of hyperthyroidism,[40] converting a hazardous and complicated procedure to one which is for the most part simple and safe.[41] As a sole therapeutic approach they have been successful in a small number of cases only, recurrences being common after the drug is stopped.[42]

With the development of adequate technics for preoperative and postoperative care, surgical intervention deserves serious consideration in any case of hyperthyroidism. It has the advantage of exposing the pathology and this is an important consideration in nodular goiter[43] in which malignancy might be present.[44] There are present, however, the hazards attendant upon any surgical procedure. To this is added the danger of damage to the vocal cords or parathyroid tetany. If resection is adequate recurrences are slight,[45] but radical resection certainly increases the incidence of recurrent nerve or parathyroid complications.

The therapeutic use of radioiodine has the advantage of being almost completely and permanently effective in controlling the disease. There is no discomfort to the patient in the administration; it is relatively cheap and complications as a result of therapy are few.[46] It is not immediately effective, taking a matter of six or eight weeks for the full therapeutic effect to be realized and this is a definite drawback in some cases. The chief disadvantage is the lack of exact knowledge of the future changes which might take place as a result of semichronic radiation of the gland.[47] Although there is no evidence to substantiate this point in the human, many fear the possibility of late malignancy being induced.[48] In a few instances in which it has been possible to study the post-irradiated thyroid gland following therapy, the findings have consisted chiefly of fibrosis and atrophy with some areas of hyperplasia.[44] These sections have been examined by a group of pathologists who feel, with some dissent, that there is no evidence of change present consistent with future malignant degeneration. A recent report concerned itself with the observation of a group of

rats some two years following a dose of radioiodine.[49] Seven of twenty-five of these animals had definite carcinoma of the thyroid. Of those animals whose thyroid glands showed carcinoma, the uninvolved portion of the gland did not show hyperplasia. Other work suggests that hyperplasia of the gland always precedes neoplasia.[50] The crux of the situation then is whether these neoplasms resulted from direct stimulation of radioiodine or from secondarily induced thyrotropic stimulation. In view of these findings, most workers have adopted a conservative approach toward patient selection.[41, 51] In general, few will treat any individual under 40 or 45 years of age or whose life expectancy is longer than 25 years. It is definitely indicated in any instance of recurrent hyperthyroidism following surgery,[52] no matter what the age. It may be given to the patient who refuses surgery and is not cooperative enough to be controlled with the thioureas. Nodular goiters in general do not respond as well as diffusely enlarged goiters to radioiodine. For this reason and because of the increased incidence of malignancy in nodular goiter, surgery is to be recommended unless there is good evidence to support a diagnosis of benign hyperplasia.[53] Some recently developed instruments which demonstrate the anatomic localization of the tracer dose may be useful in this regard[54] because a nodule which concentrates radioiodine is much less likely to be malignant than one which does not concentrate it. Thyroid biopsy may also be of use in this situation.[55] However, because of the danger of implantation of tumor cells in the needle tract, one must be prepared to operate if a carcinoma is present.

SUMMARY

In the younger individual with hyperthyroidism, thioureas can be tried. If they do not produce a remission, then surgery is the preferred therapy. In the case of the individual more than 45 years of age, or in whom the life expectancy is less than 25 years, radioiodine is the treatment of choice. Patients with postoperative recurrences should receive radioiodine. Until scanning methods are improved and thyroid biopsy becomes a more routine procedure, any nodular goiter in which the suspicion of malignancy exists should be submitted to surgery.

1325 S. Grand Ave.

Acknowledgment: The author is indebted to Dr. Daniel L. Sexton for his kindness in reviewing this manuscript.

BIBLIOGRAPHY

1. Aebersold, P. C.: Production and Availability of Radioisotopes, J. Clin. Investigation **28**:247, 1949.
2. Astwood, E. D., and Stanley, M. M.: Use of Radioactive Iodine in the Study of Thyroid Function in Man, West. J. Surg. **55**:625, 1947.
3. Lein, A.: Studies of the Fixation of Radioactive Iodine in the Rabbit Thyroid, Endocrinology **32**:429, 1943.
4. Dvoskin, S.: The Thyroxine-like Action of Elemental Iodine in the Rat and Chick, Endocrinology **40**:334, 1947.
5. VanderLaan, W. P., and VanderLaan, J. E.: The Iodide-concentrating Mechanism of the Rat Thyroid and Its Inhibition by Thiocyanate, Endocrinology **40**:403, 1947.
6. Raben, M. S., and Astwood, E. B.: The Use of Radioiodine in Physiological and Clinical Studies on the Thyroid Gland, J. Clin. Investigation **28**:1347, 1949.
7. Dempsey, E. W.: Flourescent and Histochemical Reactions in the Rat Thyroid Gland at Different States of Physiological Activity, Endocrinology **34**:27, 1944.
8. Dempsey, E. W.: The Chemical Cytology of the Thyroid Gland, Ann. New York Acad. Sc. **50**:336, 1949.
9. Glock, G. E.: Peroxidase Activity of the Thyroid, Nature **154**:460, 1944.
10. de Robertis, E.: Proteolytic Enzyme Activity of the Colloid Extracted From Single Follicles of the Rat Thyroid, Anat. Rec. **80**:219, 1941.
11. Dziemian, A. J.: Proteolytic Activity of the Thyroid Gland, J. Cell & Comp. Physiol. **21**:339, 1943.
12. Rawson, R. W.; McGinty, D. A., and Peacock, W.: The Comparative Effect of Various Goitrogenic Agents on the Collection of Radioactive Iodine by the Thyroid Gland in Rats and Chicks, Endocrinology **39**:78, 1946.
13. Randall, L. O.: Reaction of Thiol Compounds With Peroxidase and Hydrogen Peroxide, J. Biol. Chem. **164**:521, 1946.
14. Astwood, E. B.; Sullivan, J.; Bissell, A., and Tyslowitz, R.: Action of Certain Sulfonamides and of Thiourea Upon the Function of the Thyroid Gland of the Rat, Endocrinology **32**:210, 1943.
15. McGinty, D. A.: Iodine Absorption and Utilization Under the Influence of Certain Goitrogens, Ann. New York Acad. Sc. **50**:403, 1949.
16. Ingram, W. R.: The Hypothalamus: A Review of Experimental Data, Psychosomat. Med. **1**:48, 1939.
17. Jensen, J. W., and Clark, D. E.: Localization of Radioactive I-thyroxine in the Neurohypophysis, J. Lab. & Clin. Med. **38**:663, 1949.
18. Greer, M. A.: The Role of the Hypothalamus in the Control of Thyroid Function, J. Clin. Endocrinology **12**:259, 1952.
19. Morton, M. E.; Chaikoff, L. L., and Rosenfeld, S.: Inhibiting Effect of Inorganic Iodide on the Formation in Vitre of Thyroxine and Diidotryosine by Surviving Thyroid Tissue, J. Biol. Chem. **154**:381, 1944.
20. Raben, M. S.: The Paradoxical Effects of Thiocyanate and of Thyrotropin on the Organic Binding of Iodine by the Thyroid in the Presence of Large Amounts of Iodide, Endocrinology **45**:296, 1949.
21. Rawson, R. W.; Moore, F. D.; Peacock, W.; Means, J. H.; Cope, O., and Ridell, C. B.: Effects of Iodine on the Thyroid Gland in Graves Disease When Given in Conjunction with Thiouracil, J. Clin. Investigation **24**:869, 1949.
22. Rawson, R. W.: Physiological Reactions of the Thyroid-stimulating Hormone, Ann. New York Acad. Sc. **50**:491, 1949.
23. Lerman, J.: Iodine Components of the Blood. Circulating Thyroglobulin in Normal Persons and in Persons With Thyroid Disease, J. Clin. Investigation **19**:555, 1940.
24. Taurog, A., and Chiakoff, I. L.: The Nature of the Circulating Thyroid Hormone, J. Biol. Chem. **176**:639, 1948.
25. Rosenberg, I. N.: The Nature of the Circulating Hormone in Graves Disease, J. Clin. Investigation **30**:1, 1951.
26. Deiss, W. P.; Albright, E. C., and Larson, F. C.: A Study of the Nature of the Circulating Hormone in Euthyroid and Hyperthyroid Subjects by Use of Paper Electrophoresis, J. Clin. Investigation **31**:1000, 1952.
27. Barker, S. B.: Mechanism of the Action of Thyroid Hormone, Physiol. Rev. **31**:205, 1951.
28. Gemmill, C. L.: Enzymatic Mechanisms of Thyroxine, J. Clin. Endocrinol. **28**:1330, 1952.
29. Rawson, R. W.: The Use of Radioactive Iodine in Studying the Pathologic Physiology of Thyroid Disease, J. Clin. Investigation **28**:1330, 1949.
30. Freedberg, A. S.; Chamovitz, D. L., and Kurland, G. S.: Thyroid Function in Normal and Pathological States as Revealed by Radioactive Iodine Studies, Metabolism **1**:26, 1952.
31. Chapman, E. M., and Evans, R. D.: Treatment of Toxic Goiters With Radioactive Iodine, N. Clin. N. America 1211 (September) 1949.
32. Skanse, B.: Radioactive Iodine in the Diagnosis of Thyroid Disease, Acta Med. Scandinav. Supp. 235, 1949.
33. Levy, R. P.; Palmer, W. G., and Jefferies, W.: The Value of Thyrotropin in the Diagnosis of Obscure Hypothyroidism, J. Lab. & Clin. Med. **40**:823, 1952.
34. Trunell, J. B.; Marinelli, L. D.; Duffy, B. J.; Hill, R.; Peacock, W., and Rawson, R. W.: The Treatment of Metastatic Thyroid Carcinoma With Radioactive Iodine: Credits and Debits, J. Clin. Endocrinol. **9**:1138, 1949.
35. Money, W. L.; Rall, J. E., and Rawson, R. W.: Effect of Low Iodine Diet on Thyroid Function in the Rat, J. Clin. Endocrinol. **12**:1495, 1952.
36. Williams, R. H.: Textbook of Endocrinology, Philadelphia, W. B. Saunders Company, 1950, p. 96.
37. Astwood, E. B.: Treatment of Hyperthyroidism With Thiourea and Thiouracil, J.A.M.A. **122**:78, 1943.
38. Moore, F. D.; Sweeney, D. N.; Cope, O.; Rawson, R. W., and Means, J. H.: Use of Thiouracil in Preparation of Patients With Hyperthyroidism for Therapy, Ann. Surg. **120**:152, 1944.
39. Himsworth, H. P.: Thiouracil and Its Derivatives in Routine Treatment of Thyrotoxicosis, Brit. M. J. **2**:61, 1944.
40. Bartels, E. C.: Hyperthyroidism, An Evaluation of Treatment With Antithyroid Drugs Followed by Subtotal Thyroidectomy, Ann. Int. Med. **37**:1123, 1952.
41. Cope, O.: Diseases of the Thyroid Gland, New England J. Med. **246**:368, 1952.
42. McCullagh, E. P.; Humphrey, D. C.; McBarvey, C. J.,

and Dundergren, V.: Results of Propylthiouracil Therapy for Hyperthyroidism, J.A.M.A. 147:106, 1951.
43. Bartlett, R. W.: Pitfalls in the Management of Nodular Goiter, J. Missouri M. A. 48:285, 1951.
44. Cope, O.; Dobyns, B. M.; Hamlin, E., and Hepkirts, J.: What Thyroid Nodules Are to Be Feared, J. Clin. Endocrinol. 9:1012, 1949.
45. Bartlett, W.: The Avoidance of Recurrent Hyperthyroidism, J. Missouri M. A. 49:662, 1952.
46. Soley, M. H., and Foreman, N.: Radioiodine Therapy in Graves Disease, J. Clin. Investigation 28:1367, 1949.
47. Nickerson, S. J.: Cosimetric and Protective Considerations for Radioactive Iodine, J. Clin. Endocrinol. 8:721, 1948.
48. Brues, A. M.: Biological Hazards and Toxicity of Radioactive Isotopes, J. Clin. Investigation 28:1286, 1949.
49. Goldberg, R. C., and Chaikoff, I. C. Induction of Thyroid Cancer in the Rat by Radioactive Iodine, Arch. Path. 53:22, 1952.
50. Money, W. L., and Rawson, R. W.: The Experimental Production of Thyroid Tumors in the Exposed to Prolonged Treatment With Thioracil, Cancer 3:321, 1950.
51. Haines, S. F.; Keating, F. R.; Power, M. H.; Williams, M. D., and Kelsey, M. P.: The Use of Radioiodine in the Treatment of Exophthalmic Goiter, J. Clin. Endocrinol. 8:813, 1948.
52. Werner, S. C.; Quimby, E. H., and Schmidt, C.: Radioactive Iodine in the Treatment of Hyperthyroidism, Am. J. Med. 7:731, 1949.
53. Williams, R. H.: Selection of Therapy for Individual Patients With Thyrotoxicosis, J.A.M.A. 139:1064, 1949.
54. Allen, H. C.; Kelley, F. J., and Greene, J. A.: Observations on Nodular Goiter With the Gammagraph, J. Clin. Endocrinol. 12:1356, 1952.
55. Crile, G., and Vickers, A. L.: Special Uses of the Silverman Biopsy Needle in Office Practice and at Operation, Am. J. Surg. 83:83, 1952.

Others Say

Levering's Fifty Years

Great benefactions are measured by the service they render, by the good they achieve.

Having rounded a half century of serving the community of Hannibal and an expanding surrounding area, Levering Hospital has reached a Golden Anniversary. It was in February, 1903, that the institution whose original consideration was "the Love of God and Charity to Mankind," was first opened to service to these lofty purposes.

Over the week end there have been events giving special recognition to this occasion. Many hundreds have participated in recognizing the anniversary and in tribute to those who made this great institution possible.

These were appropriate ceremonies. Yet the outstanding service rendered by the institution itself has been the real testimonial to those who are given this recognition.

First, Aaron Righter Levering who with his wife, brought into reality their dream of meeting a long-felt need of the community they loved. They purchased the site and built the first hospital with the counsel of Dr. J. N. Baskett, first president of the Board of Control.

Then 28 years later Wilson B. Pettibone, whose many benefactions are visible in numerous places in Hannibal, recognized the need for more room to carry on the wonderful work of the hospital and with a gift of $125,000 for an addition of rooms and facilities doubling its capacity.

Another era in expansion of this fine institution was in 1941-42 when its capacity was increased with city and federal funds to bring it to a total of 157 beds with auxiliary rooms and facilities that a modern hospital must have.

There have been other benefactions down through the years from scores of those who wanted to join in this fine community service, directed in many ways, all helpful to the institution and its years of serving.

The Board of Control, first appointed by Mr. Levering and which has been continued to administer its affairs through the years, the Woman's Auxiliary also functioning throughout the period and which has organized and executed this observance of the 50th anniversary, the staff of doctors, nurses and employees all have made their contributions to make Levering outstanding.

Now, as it starts on another half century Levering Hospital both by its record of 50 years and the service it is now rendering, has the confidence of an expanding community that it will continue to render outstanding good works in the tradition it has achieved. —*Hannibal Courier-Post.*

An M.D. Investment

Before you get crabby over the size of your next medical bill, consider this case history of the cost, in time alone, of training one young doctor today. He graduated from high school at 17 and spent the next two winters and three summers taking pre-medical training at the University. By foregoing vacations, he completed three years of work in a little less than two and one-half years. Then came three and half years in medical school under the accelerated wartime program, again with no vacations. Following that, a year as intern, and a year's service on the medical staff of the navy. Next, a year with an eye specialist, through whose good offices he was appointed a resident in a big eye hospital (at the magnificent salary of $50.00 per month). After three years of that, he can take his "specialty board" exams and, if he passes those satisfactorily, he will be allowed to hang out his shingle as an eye specialist and take his chances of building enough of a practice to make a living.

Time elapsed since high school graduation, 11 years (it would have been 12 normally without the acceleration of the program during the war). Today, finally ready to start trying to earn a living for his wife and two children, he has no money of his own—only several thousands of dollars of debt and more still to be incurred for office furnishings, rent, office assistants and instruments before he treats his first patient. He's nearly 29 now. If he's capable, keeps his health, and doesn't run into a national or international economic crash, or the community where he's located doesn't have too many crop failures, he should be out of debt and have an established practice by the time he's 40. Another 10 years and he'll probably have a nice home and some other property, along with an assortment of ulcers, heart murmurs and high blood pressure. Roll all that over in your mind a while and see if that doctor's bill still looks as high as it did.—*Jefferson City Farm Bureau News.*

50 YEARS AGO

℞ "Two parts of milk to one of water fulfills most of the essential conditions (for infant feeding) if 1 and 2/5 percent of fat = about 2 and 4/5 percent of 50 percent cream - that is, some 15 drops to the ounce - and 3 and 1/2 percent of sugar or about 18 grains to the ounce are added." *

TODAY

℞ One part Baker's Modified Milk One part water

Baker's Madified Milk is made from Grade A Milk, (U. S. Public Health Service Milk Cade) which has been madified by replacement af the milk fat with animal and vegetable ails and by the additian af carbahydrates, vitamins and iran.

BAKER'S MODIFIED MILK SIMPLIFIES INFANT FEEDING

*Cheadle—*Artificial Feeding and Food Disorders of Infants*, Sixth Edition, (1906)

BAKER'S MODIFIED MILK
THE BAKER LABORATORIES INC.
Main Office: Cleveland, Ohio
Plant: East Tray, Wiscansin
Divisian Offices: Atlanta, Dallas, Denver, Greensbaro, N. C., Los Angeles, San Francisco, Seattle

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

Clinical Conference

THE EARLY DIAGNOSIS OF CANCER OF THE PROSTATE

WILLIAM F. MELICK, M.D.
ST. LOUIS
AND
JAMES M. MACNISH, M.D.
ST. LOUIS

TEACHING POINTS

1. There are no early symptoms.
2. Routine rectal examination may reveal hard nodule in the prostate.
3. Frequency, nocturia and burning are late symptoms.
4. Pain in the back or down the thigh may mean metastases to bone or nerve sheath.
5. Bone metastases may raise blood acid and alkaline phosphatase and show on x-rays.
6. Needle or other biopsy is required for definite diagnosis.
7. Stilbestrol and orchiectomy can relieve pain from metastases.

James M. Macnish, M.D.: We believe carcinoma of the prostate to be a disease of hormonal imbalance. We believe it is a product of androgen excess and therefore due probably to dysfunction of the anterior pituitary gland. It is the first cancer known to be produced by a hormone and the first to be arrested in growth by its opposite hormone—estrogen. John Hunter found 160 years ago that the prostates of castrated individuals were small and inactive.

Now that the average age of man is increasing, cancer of the prostate is assuming greater importance and it is being discovered more frequently. Indeed, it is the most common cancer of the genito-urinary tract and, after 60 years of age, is the most common cancer.

If a large number of sections were taken from every prostate, it is probable that the pathologist would declare from 17 to 40 per cent to be malignant.

Perhaps 85 per cent of prostatic carcinomata are adenocarcinomata in type, 10 per cent undifferentiated and 5 per cent squamous cell. A mixture of the types is common, but pathologists differ as to the grouping of cell types. The adenocarcinoma arranged in tubules resembles so closely the normal glandular cell that the diagnosis is often missed, and some 35 per cent of all cases originally diagnosed benign by the pathologist ultimately turn out to be malignant. Hence, confusion arises.

Carcinoma begins usually posteriorly in the prostate and extends anteriorly. The right lobe is involved more commonly than the left lobe. With this in mind, the rectal examination may be performed carefully as a routine office procedure in cancer detection.

Spread of carcinoma is limited at first by the fascia of Denonvilliers; spread later occurs by direct extension upward through the base of the bladder, as well as by the blood stream, through the normal lymphatics, and along perineural lymphatics in the pelvis. Bone is commonly invaded, particularly the pelvis, femur, ribs, the low lumbar vertebrae, rarely even the skull. These bone metastases are, for the most part, osteoblastic. Death from uremia occurs when carcinoma spreads from the prostate to the base of the bladder to obstruct the ureters.

Some patients will now be presented to emphasize points in early diagnosis.

CASE REPORTS

Early Diagnosis From Routine Rectal Examination

(C. W. Watkins, M.D.; A. J. Stevenson, M.D., and V. Moragues, M.D.)

Case 1. Mr. J. R., when 69 was hospitalized for gastric ulcer and had a routine rectal examination on the medical ward which revealed enlargement of the prostate. Nocturia was the only urinary complaint. A punch biopsy revealed carcinoma of the prostate, and on September 2, 1950, the prostate was removed by the perineal route.

Hidden Cancer of the Prostate

(S. Heineman, M.D., and V. Moragues, M.D.)

Case 2. Mr. C. S., aged 74, had clinical evidence of benign prostatic hypertrophy, but histologic examination of the prostate following its suprapubic removal on February 14, 1950, showed carcinoma.

Some Diagnostic Difficulties

(J. E. Byrne, M.D.; W. K. Mueller, M.D., and V. Moragues, M.D.)

Case 3. Mr. C. R. had dysuria and frequency at the age of 72, and carcinoma was suspected because of a stony hard nodule felt in the right lobe of the prostate when examined by rectum in May, 1950. However, punch biopsy produced inadequate tissue for diagnosis, x-ray films were unrevealing and the acid phosphatase level of 9.8 units was inconclusive. For one and one-half years back pains have persisted, their cause undetermined.

William F. Melick, M.D.: An "early" diagnosis of cancer of the prostate was made in case 1 when Dr. Watkins did a routine rectal digital examination on the patient, even though the patient was on the medical service, and even though the diagnosis of gastric ulcer had been made. Prostatectomy resulted, and a five-year survival of the patient is anticipated. (The patient survives

From St. Louis University School of Medicine and Firmin Desloge Hospital, aided in part by Grant CT 619 U. S. Public Health Service, and by the Missouri Division of the American Cancer Society and the State Division of Health.
From Tumor Teaching Conferences Nos. 115, 124 and 160, held January 25 and April 19, 1951, and January 31, 1952.

one and one-half years after prostatectomy, clinically well.) Had Dr. Watkins been less impressed with teaching points 1 and 2, this early diagnosis might have been missed.

The diagnosis of cancer of the prostate was made in case 2 because the prostate was examined histologically following prostatectomy. (This patient died March 1, 1952, two years after operation, of mesenteric thrombosis with residual carcinoma of the prostate.)

A diagnosis of cancer has not been established in case 3 despite a hard mass palpable in the right lobe of the prostate, and despite back pains. The x-rays are normal and the serum acid phosphatase levels are inconclusive, but suggest carcinoma. Stilbestrol probably should be used to determine its effect on the back pain.

DR. MACNISH: The prostate, an essential producer of the enzyme phosphatase, was shown in 1938 by the Gutmans to produce an excess of the acid phosphatase when malignancy occurred. When bone was invaded by prostatic metastases the output might be tremendous with levels of acid phosphatase even up to 1,000 units per 100 cubic centimeters of blood in man. Readings for acid phosphatase under 3 units are normal; readings from 3 to 10 are suggestive, and readings of more than 10 units almost certainly indicate cancer. The administration to the patient of testosterone may elevate the level while stilbestrol may depress it; however, the level of the serum acid phosphatase is neither an indication of estrogen dosage nor is the level always a reliable index of metastatic carcinogenic activity. Paget's disease normally shows an elevation of the alkaline phosphatase, only, and not usually of the acid phosphatase. Elevation in the alkaline phosphatase level is caused by bone destruction.

Charles Huggins and others have shown that androgen causes metaplasia of the prostate epithelium. Conversely, his group showed that castration in particular, and to a lesser extent synthetic estrogens, diminished both the growth of cancer and the level of serum acid phosphatase, especially in the presence of bone metastases. Estrogen therapy is no substitute for castration or for orchiectomy, but simply reinforces the therapeutic effect of these measures.

Unfortunately, the symptoms of prostatic cancer are few and occur late and one is fortunate to see as favorable a case as Patient 1. Early cancer of the prostate is, of course, asymptomatic; while later there is disturbance in urination, perhaps even hematuria and, finally, metastases cause pain in the perineum and back, especially the sciatic type down both legs.

Examination of the rectum with the finger, blood chemistry and x-rays of the low spine, pelvis and femora comprise the chief practical helps in diagnosis. Aspiration biopsy of the prostate also may be of aid. Here, we have yet to try exfoliative cytology.

The feel by rectum of induration in the notch between the seminal vesicles is highly suggestive of malignancy, as is the feeling of isolated, hard nodules in the posterior lobe. Feeling enormous, irregular nodules or a small, stony hard, fixed prostate make the diagnosis obvious. The indurated feel from chronic prostatitis is more diffuse than the induration from carcinoma, and there is also an absence of fixation of the prostate with inflammation. The rectal hardness felt from prostatic calculi will be distinguished in the x-ray films.

Treatment comprises surgery, castration and synthetic estrogens. With advanced bone metastases, especially when accompanied by a high level of the serum acid phosphatase, orchiectomy and estrogen therapy are indicated. With urinary obstruction, especially from the small scirrhus prostate with metastases, transurethral resection, castration and estrogens are best. If cancer is considered early enough for radical surgery—a situation not often encountered—the widest prostatectomy, trigonectomy, vesiculectomy, with partial cystectomy, should be done along with castration and estrogens.

DR MELICK: Many physicians recommend that early lesions of the prostate should be biopsied, whether with a needle biopsy, or approaching the gland by perineum. If one approaches the gland any other way, one is on the wrong side of the prostate for biopsy. Only by way of the perineal route will the early lesion be detected, for the early lesion arises posteriorly and the early lesion will be missed by an anterior biopsy by the suprapubic or transurethral route.

We have run a series of fifty needle biopsies in Firmin Desloge Hospital done by Drs. Spaulding, Stevenson and Heineman. Of the fifty patients, twenty-one were shown by biopsy to have carcinoma, and six of them were so early, that radical perineal prostatectomies were performed on them. Needle biopsy is not always successful and in eight patients inadequate tissue was obtained for diagnosis.

Frozen section has often proven disappointing in diagnosis at the operating table; and the frozen section diagnosis does not always agree with the definitive paraffin section diagnosis.

Figures from the literature indicate that only some 2 to 5 per cent of patients with prostatic cancer are diagnosed early enough to justify radical prostatectomy. These figures we have increased by threefold by using needle biopsies.

JOHN P. WYATT, M.D.: What was said about the role of the pathologist in diagnosis I think carried a thread of truth; certainly, carcinoma of the prostate is a difficult type of carcinoma to diagnose. Samples removed for biopsy often prove, even today, inadequate. Furthermore, these changes in morphology which are present may simulate those changes found in benign hypertrophy so as to confuse many pathologists. For example, we had last week two instances of "fool's

cancer"—that is, of squamous metaplasia of the prostate.

DON C. WEIR, M.D.: Characteristic osteoblastic lesions distributed throughout the pelvis are diagnostic of metastatic malignancy from carcinoma of the prostate. In some cases one has a great deal of difficulty making a differential diagnosis from the lesions produced by Paget's disease. However, further film survey of the bony architecture will aid in the problem cases and usually a definite diagnosis can be established.

E. L. KEYES, M.D.: Diagnosis is the topic for the conference today, but some figures from Firmin Desloge Hospital from 1933 to 1951 may be added, nevertheless. During that time prostatic cancer affected 107 patients compared with ninety-seven with bladder malignancy, forty-one with renal malignancy and thirteen with testicular malignancy. The patients with prostatic carcinoma averaged 68 years of age, those with bladder or renal malignancy averaged 55, while those with testicular malignancy averaged 34 years of age.

The five-year survival rate for prostatic carcinoma at Firmin Desloge Hospital is 12 per cent, with five survivors of nineteen curatively treated and surviving treatment. The fact that a patient survives prostatic cancer for five years does not signify that he is necessarily cancer free at the end of that time, as the case 4 indicates. What is nowadays gratifying is the ability to make life bearable to the patient with prostatic cancer, the ability to control his pain in a manner not feasible prior to the introduction of endocrine therapy. Case 4 illustrates this.

CASE REPORT

6 Year Survival With Bone Metastases From Prostate

(W. F. Melick, M.D.)

Case 4. When Mr. G. F., aged 71, was seen in 1946 he had had nocturia since 1941, and the prostate felt much enlarged, especially the right lobe. Transurethral resection on April 28, 1946, revealed carcinoma, so orchiectomy was performed and during the ensuing six years his low back pain, and pain down the left leg on walking, shown by x-ray to be due to bone metastases, has been controlled by doses of diethylstilbestrol, from 5 to 25 milligrams, daily. When last seen, six years postoperatively, on September 15, 1952, he was comfortable, though films still showed the presence of shadows in the lumbar vertebrae presumably from bone metastases.

Medicine has been defined to be the art or science of amusing a sick man with frivolous speculations about his disorder, and of tampering ingeniously, till nature either kills or cures him.

The disease and its medicine are like two factions in a besieged town; they tear one another to pieces but both unite against their common enemy, Nature. —Jeffrey.

More and more doctors are prescribing Daricraft Homogenized Evaporated Milk for babies . . . and for convalescent diets

Always uniform in quality, safe, sterilized, high in food value and minerals. Contains 400 U. S. P. units Vitamin D per pint of Daricraft. Easily digested.

PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

...specify

ABBOTT'S

new Oral Anti-biotic

Case Report

LIPOSARCOMA

MELVIN A. CASSEL, M.D.
ST. LOUIS

THE SUDDEN PROGRESSIVE growth of a subcutaneous tumor, especially if located in the thigh, gluteal or interscapular regions, should arouse suspicion of a liposarcoma. The lesion is particularly suspect if it is of rubbery consistency, nodular and attached to the underlying muscle.

These tumors are relatively rare, contrary to Ewing's[4] statement that many are not recognized due to their variegated structure. Stout[10] reported only twenty-one cases out of a total of 1,454 lipomas collected over a period of thirty-seven years at Presbyterian Hospital, New York. Geschicter[5] found only twelve cases out of a total of 490 lipomas. Morgan[8] found three sarcomas in eighty-eight lipomas in a five year period. Moreland and McNamara[7] could find only nine liposarcomas out of 16,000 patients admitted to the Veterans Administration Hospital at Hines, Illinois, in a ten year period.

Since Virchow's[5] first description of the malignant fat tumor in 1857 there have been less than 100 liposarcomas reported in the literature. Statistically and clinically these are most unusual tumors. The following case demonstrates the high degree of malignancy these tumors may attain.

REPORT OF CASE

Case W. W., a 59 year old white male, a patient of Dr. A. V. Benincasa, was admitted to Faith Hospital on August 7, 1951, complaining of a "lump on his back." He had first noticed a small nodule "about the size of a pea" between the scapulae about six weeks prior to admission. In the interim the nodule had grown rapidly until it was now the size of an orange. There was no pain or discomfort associated with the growth and the patient felt compelled to see a doctor because other people noted the protrusion of the mass through his clothes.

The tumor was located mesial to the angle of the left scapula and was approximately 7 centimeters in diameter with an elevation of four centimeters above the level of the skin. The mass was firm and slightly movable in one direction. The skin over the tumor was intact and of normal appearance. There was no history of weight loss or other constitutional symptoms.

On August 8, 1951, under pentothal anesthesia, the mass was excised *en bloc*. It was noted at that time that the tumor was encapsulated and the capsule was attached to the fascia of the latissimus dorsi. Cut section of the specimen revealed a homogeneous yellowish gray tissue of rubbery consistency and a slimy surface. A frozen section was done and this demonstrated the bizarre lipoblasts with eccentric nuclei, giant cells and frequent mitotic figures (fig. 1). The diagnosis of liposarcoma was made by Dr. S. D. Katz, pathologist. Consequently, a wide resection of skin, subcutaneous tissue and a portion of the latissimus dorsi was done. The resulting defect could not be closed at that time and the wound was merely packed with vaseline gauze. Two weeks later, the large granulating surface was closed by widely undermining the skin flaps and the edges were approximated without undue tension.

Follow up on June 12, 1952, ten months after operation, failed to reveal local recurrence or any evidence of metastasis.

DISCUSSION

Liposarcomas are strange tumors as regards their origin and behavior. Stout[10] believes that the malignant fat tumor arises from preexisting lipoma and this has been corroborated by other investigators.[2, 7]

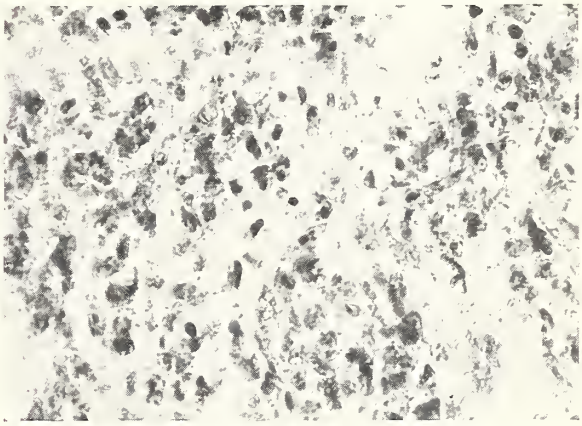


Fig. 1. High power section of tumor showing lipoblasts with bizarre hyperchromatic nuclei, pyknotic cells and occasional giant cells typical of Stout's Type II liposarcoma.

Although in gross appearance the tumors bear resemblance to one another in that they are usually nodular, firm and encapsulated, not unlike brain tissue on cut section, the histologic structure may be extremely divergent. In an attempt to clarify the confusing histologic picture, Stout[10] distinguishes the following four types.

1. The well differentiated myxoid type which resembles embryonal fat and adult fat cells.
2. The poorly differentiated myxoid type which consists of bizarre lipoblasts with misshapen nuclei, hyperchromatic and pyknotic cells with signet ring cells scattered throughout the section.
3. The round cell or adenoid type which is made up of round cells with a central nucleus and foamy cytoplasm. There is a delicate stroma and a poor blood supply with myxoid elements notably absent.
4. The mixed group is composed of two or more of the preceding types.

The clinical behavior of these tumors is likewise diverse. Most commonly the middle age group is affected although occasional cases have been reported in children.[10] It is slightly more common in

From the Surgical Department of Faith Hospital, St. Louis, Mo.

the female. Although the tumor may occur wherever fat is normally found, the most frequent sites for predilection are the retroperitoneal space, the lower extremities, the popliteal and gluteal regions. Unusual sites are the mesentery, vulva,[12] bone,[11] extradural space and mediastinum.[1]

The outstanding characteristic of these tumors is the enormous size they may attain. The largest tumor reported was that of Delamater[10] which weighed 275 pounds. The rate of growth varies directly with the predominating type of cell—the larger and slower growing tumors belonging to the well differentiated myxoid type while the more rapidly malignant tumors consist of the adenoid and mixed types. At one extreme is the case cited by Stout in which the patient lived thirty-seven years with the untreated tumor while, at the other extreme in his series, is the tumor which attained the size of 24 by 15 cm. in six months and the patient was dead from metastases six months after amputation of the extremity.

That these tumors do metastasize has been shown repeatedly.[7, 9] Stout reported metastases in six of seventeen cases; 60 per cent of the secondary lesions appearing in the lungs and 25 per cent spreading to the liver.[10] In his opinion the well differentiated myxoid type seldom if ever metastasizes while the other three types frequently disseminate to other organs. All types infiltrate contiguous structures, especially after local recurrence of the growth.

Diagnosis should not be difficult if one bears in mind that these tumors tend to occur in certain areas, growth is sudden or slowly progressive and the mass has a nodular, firm consistency on palpation. Occasionally hemorrhage into the lesion will cause symptoms but, generally, it is the size and growth of the tumor which takes the patient to the physician.

Gross examination of the tumor at the time of operation will reveal the encapsulated nodular tissue which on cut section has a yellowish gray appearance and a slimy surface; occasionally degenerative cysts or areas of hemorrhage may be seen.

In recurrent and metastatic tumors the lesion is anaplastic and lacks a capsule which allows extensive infiltration into the surrounding tissue.

The final diagnosis in all cases should be made by frozen section or paraffin section.

TREATMENT

Surgery appears to be the treatment of choice, using a wide excision of normal tissue to eliminate any possible infiltrating roots. The underlying muscle and its fascia to which the tumor is usually attached should, in particular, be widely sacrificed. If the tumor is the well differentiated myxoid type, the sacrifice of normal tissue need not be as radical as in the more malignant growths.

The role of radiotherapy is controversial.[1, 7] Most men, however, feel that this mode of treatment should not be neglected especially in the larger and deepseated tumors in which surgical extirpation is uncertain.[5, 10] Its use as a routine postoperative measure to mop up any possible overlooked malignant seedlings also appears to be rational.

Except for type I the prognosis of these unpredictable tumors must remain guarded inasmuch as their degree of malignancy may be extremely great. This is especially true in the retroperitoneal tumors in which the lack of limiting fascial planes allows wide and inaccessible extension of the tumor cells. In the extremities or back, the prognosis should be more favorable provided the tumor is seen early and wide removal of surrounding tissue accomplished.

SUMMARY

1. Liposarcoma is a rare unpredictable tumor having a predilection of occurrence in the thigh, gluteal and interscapular regions.

2. Histologically, these tumors may be divided into four types as described by Stout.

3. The diagnosis should be considered when a subcutaneous tumor suddenly begins to grow, and especially if the lesion is nodular, rubbery and attached to muscle.

4. Treatment consists of wide excision of the involved area and postoperative radiotherapy.

5. A case report of liposarcoma is presented demonstrating its extreme degree of malignancy, both clinically and histologically.

2801 N. Taylor Ave.

BIBLIOGRAPHY

1. Ackerman, L. V., and Wheeler, P.: Liposarcoma, South. M. J. **35**:156, 1942.
2. Berman, H., and Mainella, F. S.: Liposarcoma of Thigh, New York State J. Med. **51**:772, 1951.
3. Daly, J.: Liposarcoma, Texas State J. Med. **39**:332, 1943.
4. Ewing, J.: Neoplastic Diseases, 4th ed., 1940, p. 190.
5. Geschicter, C. F.: Lipoid Tumors, Am. J. Cancer **21**:617, 1934.
6. Harrington, S.: Retroperitoneal Fibromyxolipoma, Surg. Clin. N. America **14**:636, 1934.
7. Moreland, R. B., and McNamara, W. L.: Liposarcoma, Arch. Surg. **45**:164, 1942.
8. Morgan, J. O.: Lipoma and Liposarcoma, J. Internat. Col. Surg. **14**:591, 1950.
9. Starkloff, G. B.; Saxton, J. A., and Johnson, R. E.: Liposarcoma of an Extremity Associated With Multiple Subcutaneous Lipomas, Ann. Surg. **133**:261, 1951.
10. Stout, A. P.: Liposarcoma, the Malignant Tumor of Lipoblasts, Ann. Surg. **119**:86, 1944.
11. Stewart, F. W.: Primary Liposarcoma of Bone, Am. J. Path. **7**:87, 1931.
12. Taussig, F. J.: Liposarcoma of Vulva, Am. J. Obst. & Gynec. **33**:1017, 1937.

Medical Utopia

. . . someone must assume the position of the coordinator—the master detective who takes the clues the various specialists provide—give to each its relative importance and significance in the light of the entire story and finally comes up then with a logical solution.

In our present medical community no one is in a position to assume this responsibility except the general practitioner but he cannot assume it unless there is complete cooperation and understanding between this practitioner and his consultants.—D. R. Seabaugh, M.D., *Journal, Cape Girardeau County Medical Society.*

Special Article

THE PHYSICIAN AND EASTER

REV. HERBERT E. DUNCAN
KANSAS CITY

EVERY morning the little fruit man stops in front of my church. He does not enter. He merely lowers his basket to the sidewalk, doffs his cap, slightly bows his head before the window high in the Gothic tower, and then goes off down the street. He is ancient and wrinkled. The sagging lines of body and face suggest the rugged work of many hard years. But, after his silent tribute to the scene of the Ascending Christ, pictured in the rich coloring of stained glass, he seems to straighten up, he puts on an air of reassurance, and his back loses some of its stoop. He has managed to capture a new strength to carry him through the teeming, bewildering uncertainty of our times. His faith is beautiful in its simplicity, confidence and trust.

Most of us lack this simple closeness to the mystery of being of the fruit man in our dependence on the scientific explanation of the ills, the misfortune and the unpredictable that befalls. We long for reassurance and feel the need for restored confidence. We search for someone whom we feel has a better answer to the mysteries of birth and death—and all between—than we do. It is into this void in the average life that the skilled doctor of medicine and the clergyman can stand as a bulwark of confidence.

The average physician has a boundless opportunity. He can go far beyond the pathologic problems to help in adjustments. For the physician is a man of science speaking in a scientific world to people who believe in science as truth. In a time of sickness or of death his words have deep meaning and his personality stimulates confidence. Not that the physician should supplant the clergyman —far from it—but what a privilege it must be when a family has depended on a doctor as a skilled man of science to find that he is also interested in mind and soul!

Here is the case of a family that has gone through the years without a major disaster. Small perplexities to be sure, the average run of the daily grind—but no heart-breaking tragedies. Then comes a catastrophe—a serious illness or a crippling accident. The family through the evidence of healing skill comes to have confidence in their doctor—they cling to his words and follow his decisions. Here is a call that goes beyond the usual hospital routine—far beyond. It is a call to help patient and family to adjust, to correct mistakes, to broader horizons and to gain a larger perspective to this business of living.

Easter, the holy and sacred season of the year, tells us there is hope for mankind; that good will conquer over evil and light will shine through any darkness that pulls us down. Easter reaffirms that we should never be downcast and lonely and afraid if once we actually grasp the true notion of the worth of the individual and feel ourselves a part of the Beloved Community—that huge invisible company of the lovers of man, of the true and beautiful, the good in all times. Easter should bring absolute certainty as to our place in these troubled times in this perplexed and blind and staggering world.

Easter is a time of confidence—of undying hope. Its message ringing through the days of the year should give confidence to physician and patient alike in the difficult times of conveying the diagnosis of impending death, and in the delicate wording of understanding when a member of a family passes into what Charles Frohman referred to as "life's most beautiful adventure." A doctor is not expected to quote the scripture of Easter, "Be not bewildered. Ye seek Jesus of Nazareth, which was crucified; he is not here: he is risen." But he can restore confidence. He can explain that it is not "all of life to live, nor, yet, all of life to die." He can tell, in these later days of Lent, that even as nature gathers strength for springtime, we can find quiet joy in the spiritual portion of our lives taking form to find expression in the glorious triumph of Easter.

Most men of medicine believe this—perhaps not in an esoteric form of magic or with the belief of the Christians of the early centuries, but with a deep sense of mature reflection and faith—they do believe in such manner as to give confidence and the power to see it through to those in their care. Some are agnostic—some conscientious individualists are atheistic—but physicians, often deep under the surface, are religious men. They have witnessed too many mysterious movements of nature to believe it all came by chance—the first cry of birth, the last gasp of a dying person, the wonderful power of the human structure to recover, and to overcome.

Easter and the physician!

A simple vendor of fruit gazing at a church window!

It matters little how it comes about if only men would strive for the good of human beings, to set humanity free from ignorance and fear, and build well-being such as to restore confidence. For real religion concerns itself with human beings and human well-being.

Minister, First Congregational Church of Kansas City.

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

We Hope to See You

Within a relatively few days after you receive this copy of MISSOURI MEDICINE, our annual State Meeting will begin. While it is impossible for every one of our members to be there, let us urge all of our colleagues to attend who can possibly make it.

From the elements of the program which have been published, it is obvious that the subjects to be presented are of such a diverse nature as to appeal to each member of our Association. Topics for those in general practice, as well as those in the specialty groups, should make this entire gathering educationally profitable for all of us.

The success of any large medical gathering, such as this, depends somewhat on the spirit of those who attend. Certainly the zest and tempo of the meeting, in part, is a reflection of the audience and its receptivity. These affairs are not just a one-way street. You may have the best talent in the world, with an apathetic audience, and still not have a "good meeting." There is something contagious about a "live audience" which transmits itself to the performers and hence enhances the mutual benefit and enjoyment.

Actually, we sometimes wonder if the privilege of attending such a gathering is realized adequately by many of us. Probably we take too much for granted. As dues paying members of our state organization we are naturally entitled to attend. But, by the same token, perhaps if we were required to make a greater sacrifice, we probably would be more eager to be there and a greater per cent of our membership would actually make every effort to arrange their plans accordingly.

There is still time to make your arrangements after receiving this last minute reminder. We feel sure the scientific program, as well as the renewing of old friendships, will more than compensate for the time involved in attending this annual session. We hope to see you there.

VINCENT T. WILLIAMS, M.D.

Lament for the Departed

Wonder whatever happened to the sulfa drugs? Informal and unofficial inquiry among pharmacists in this area indicate that prescriptions for sulfa preparations have fallen off some 80 to 90 per cent from the level of two years ago. Except for the increase in their use during the 'flu epidemic last winter, there has been little call for them, other than in combination with penicillin in a new oral form.

One of the inescapable inferences is that a good many hypo-happy physicians have gone off the deep end in the use of the antibiotics. The sulfa drugs were the first of the "wonder" series, but many have forgotten, apparently, that they are still good. In the familiar pattern that characterizes popular vogues in therapy, there has been a great tendency to ride the heck out of the winner, such as the antibiotics were in the beginning.

There are those who, in their anxiety to provide a rapid and efficacious cure for a cellulitis or other surgical infection, pour on the penicillin and the various -mycins beyond the limits of logical and reasonable necessity. With no idea of the sensitivity of the organism, even when the organism is known (which is only too infrequently) the molds are given with gay abandon—orally, parenterally and by topical application.

It is common knowledge that the resistant bacterial strains have increased markedly in the last five years. It is equally well known that allergic reactions and unpleasant side effects in certain preparations are being encountered more and more frequently. But we still have too many hit-and-run injections, given with the prayer that "this one won't have a reaction."

In my book, the modern, highly soluble sulfa preparations have been found to be, in many cases, just as effective, far less expensive, and a good deal less hazardous than the more impressive —and more injectable—molds.

JEROME I. SIMON, M.D.

From Within (IV)

After Jenner's successful vaccination against smallpox, using the cowpox virus, the idea spread over Europe and to America. Due to constant urging and persuasion on the part of the medical profession, and against continued opposition, smallpox vaccination has become so almost universal that the disease has been virtually stamped out. Likewise, methods of sanitation, treatment of water and inoculations, using the killed bacteria, has made typhoid today a rarity. Diphtheria was being partially stopped when the use of antitoxin was adopted. Subsequently, vaccinations—first using toxin-antitoxin mixtures and later toxoids—have stopped the disease almost dead in its tracks.

Whereas these three diseases (smallpox, typhoid and diphtheria) were at one time extremely prevalent, running rampant as it were, with huge death tolls, they are all now rare indeed.

Tetanus, the scourge of wars, especially when fought on the oft fertilized lands of Europe, was almost eliminated in the first World War by the prophylactic use of antitetanic serum. Now one vaccinates against it, using a toxoid. When the procedure becomes universal there will be no more tetanus.

Herd testing and the extermination of tuberculous cattle, combined with the pasteurization of milk, eliminated in America in just a few years bovine tuberculosis in man, manifested so often by the tuberculous glands of the neck, psoas abscesses, tuberculosis of the spine (hunch back), hip, knee and, more rarely, other bones. There have been other triumphs (malaria, yellow fever, bubonic plague) but they are not so noticeable.

As one looks back over medicine's fight, in treating the patient sick with the disease and at the same time in trying on a large scale to prevent the disease itself, the doctors have continually played the role of trying to get themselves out of a job. We should not omit the discoveries and uses of vitamins, nor the sulfa drugs and the antibiotics and the earlier discovered insulin. With them, miracles have been wrought, but space does not permit elaboration. All these achievements have been by the profession of medicine as it is constituted today. The political and social reformer has had no part in them—the reformers did not conceive of the programs nor did they supervise them. In reality, they have often hindered them.

F. T. H'Doubler, M.D.

Errors in the Diagnosis of Intussusception

Ravitch, et al, (J. Pediat. 37:153, 1950), reviewed five deaths from intussusception, and found serious delay had occurred in each instance.

Typically, the onset of abdominal pain is sudden, the child cries out, writhes and may vomit. Suddenly he seems well, only to have another episode later. The attacks increased in frequency. Perhaps he may have a normal stool, which may be blood tinged. However, in many cases the first blood is seen on the gloved finger following rectal examination.

The abdomen usually is flat, relaxed and nontender; there may be a visible or palpable mass. Palpation of the mass is pathognomonic.

Diagnostic errors usually fall into these categories: Ignorance of the condition; extreme duration of symptoms and relative well-being of child (forty days in one case); occurrence in the newborn, or in children well past 1 year; symptoms simulating dysentery, possibility of chronic nonstrangulating, incompletely obstructing intussusception.

We must emphasize the need for a high index of suspicion and a ready resort to a barium enema and a flat plate of the abdomen in doubtful cases.

The technic of administering the barium enema is given in detail in the quoted article. The most important warning is included in the sentence, "One should take care to see that the barium flows freely into the ileum."

Ladd and Gross (*Abdominal Surgery of Infancy and Childhood,* 1941) strongly oppose colonic inflation for several reasons: (1) Operation is delayed in those cases requiring surgery because of irreducibility; (2) ileal intussusception usually cannot be reduced by this method and (3) coexisting disease (as polyp of Meckle's diverticulum) will go unrecognized.

As in so many other medical problems, early diagnosis and prompt definitive treatment are the *sine qua non* in the successful handling of this rather common pediatric problem.

Daniel B. Landau, M.D.

"Ready to Take Over for God"?

The logical end of the Socialist idea is to control everything including the decisions about what persons are to be permitted to join the human race.

In fact, this recommendation already has some currency. A Church of England Vicar declared in a New Year's Day sermon, there are "over 55,000 new mouths to feed every morning. Obviously the time is coming when there must be some sort of birth control. That means babies by license only and on the authority of a world parliament."

Then with scientific breeding and pedigrees, the planners would really feel ready to take over for God.—*Faith and Freedom.*

Fraternally Yours

"For the Body Is Not One Member, But Many"

Almost everyone gets a little mellow around Easter and Christmas. Even the most calloused and blasé soften up at least a wisp at these two seasons. With the basic philosophy of "resurrection" in the air, perhaps it might be apropos for the medical profession to "resurrect" some of the basic fundamentals of our heritage.

For instance, why this constant bickering about "too many specialists"? Or why those snooty, down-the-nose cracks, "he's just a general practitioner"?

Medical customs and practices ebb and flow. As the pendulum swings, colleagues scramble to be certified as specialists. As the pendulum completes its arc, other colleagues scurry to organize general practitioner groups to provide a rebuttal for this apparent overemphasis toward specialization. In the heat of the scuffle, ill feelings develop; charges and counter-charges are made. All this results in discontent, discord, disunity.

As a result, all the hot words and hot air present a grotesque spectacle to the public, neither healthy nor wholesome. In these extremes, we make ourselves look mighty foolish in the public eye, especially when we get blatant with our internecine fights.

What has all of this to do with Easter, in a medical journal, some may ask. Well, in this "mellow" season, let us pick up our favorite old textbook. Let's see if therein might not be a passage applicable to this seething impassé of our own creation. Perhaps we may find something, an idea, a basis (as sensible men) to settle these differences. Almost always we have found this to be true.

And one of our favorite passages (I Corinthians, Chapter 12) covers the situation, fellow-physicians:

14. For the body is not one member, but many.

15. If the foot shall say, because I am not the hand, I am not of the body; is it therefore not of the body?

16. And if the ear shall say, because I am not the eye, I am not of the body; is it therefore not of the body?

17. If the whole body were an eye, where were the hearing? If the whole were hearing, where were the smelling?

19. And if they were all one member, where were the body?

20. But now are they many members, yet but one body.

If there is a better bit of open field running in analytic and synthetic reasoning than this used by St. Paul, we would like to know where it is. Reread these verses and see how strictly applicable to this furor, now raging between specialists and general practitioners. Please, just a few moments of serious, straight thinking; and don't we look silly?

If the Dawn Would Only Linger

On Sunday, the entire Christian world pauses in its feverish pace, to commemorate one of the greatest dramas ever revealed to mankind—the Resurrection of Christ.

Despite the commercial perversion of this comforting, stimulating masterpiece in dogma (which is provided by the zealous, competitive "Easter Parade"), the original story still remains beautiful, satisfying and triumphant in its teaching. To all those who have faith, it provides an ample rock of stability, sanity, serenity and assurance, in this otherwise shaky, uncertain world.

Rare indeed are those instances wherein we, living today, can feel that we form a part of something which is forever and ever to remain steadfast and worthy. The Easter season is such an exemplary exception.

Anyone, who has arisen early; who has felt the cool, clear, pure air of Easter morn on his cheek; who has seen the dew on the new, green turf (as if millions of brilliantly sparkling diamonds were touched by the first sunbeams); who has felt the calm, placid contentment, the peace of Easter morn, must agree: Yes, it would be wonderful if all mankind could live on and on, in such an atmosphere. And, there is such a promise in the Easter story; "that is the real story"!

According to St. Matthew: "In the end of the Sabbath, as it began to dawn . . . came Mary Magdalene and the other Mary to see the sepulchre . . . and the angel answered and said unto the women, Fear not ye! for I know that ye seek Jesus which was crucified. He is not here: for he is risen, as he said."

In the enactment of that simple, beautiful and dramatic scene, the world has been given a lesson, a precept which will remain as immutable as the very stars, the sun, the moon and the earth, while we poor animalcules scurry along with our hectic, disoriented dance of life, little heeding this story. As we fiercely compete in races for armament, as we joust for position to jettison millions of our fellowmen to their death, as the sardonic smile widens on the face of the Man of Mars—the calm, quiet lesson of Easter goes on, and will continue to do so.

Yes, it should make us stand in awe and reverence, to contemplate this new season, this season of reaffirmation of faith, and to devoutly pray: If the Dawn would only linger. V. T. W.

(Our stint in Jackson County Medical Society Weekly Bulletin, reprinted from a few Easters back.)

Missouri Medical Meetings

March 30-April 1: International College of Surgeons, Regional Conference, Statler Hotel, St. Louis.
April 1-4: American Association of Pathologists and Bacteriologists, St. Louis.
April 6-8: Missouri State Nurses Association, Statler Hotel, St. Louis.
April 15-17: Midwest Hospital Association, Municipal Auditorium, Kansas City.
April 19-22: American Radium Society, Chase Hotel, St. Louis.
April 24-25: Missouri Tuberculosis Association, Hotel President, Kansas City.
April 26-29: Missouri State Medical Association Annual Meeting, Municipal Auditorium, Kansas City.
May 4-6: Missouri Public Health Association, Hotel Governor, Jefferson City.
May 11-14: American Urological Association, Jefferson Hotel, St. Louis.
May 25-28: Catholic Hospital Association, Municipal Auditorium, Kansas City.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

The eighth National Conference on Rural Health was held at Hotel Roanoke, Roanoke, Virginia, February 27 and 28. This conference is sponsored by the Council on Rural Health of the American Medical Association in cooperation with national farm organizations. More than 600 people registered during the session, fourteen from Missouri.

On Thursday, February 26, there was an afternoon meeting of physicians who make up state rural health committees. The theme for this session was "Doctor Participation in Community Programs." This was an informal affair at which the doctors present discussed rural health problems, exchanged experiences and talked over possible activities and programs, particularly adaptable at the community level.

The two main topics at this session were: "The Place of Public Health Service in County Health Councils," and "The Place of the Physician in Rural Health Activities." The latter topic received the lion's share of the informal discussion following the four formal talks, two on each of the listed topics.

It was pointed out quite clearly that state medical association rural health committees have a definite responsibility to put before county medical societies the need and values, to all concerned, of active participation, of local doctors, in local community activities. Such activities include all those which involve the doctor as a citizen as well as those concerning him as a physician. The councilors of the medical associations need to shoulder a part of the rural health committee's responsibility in this matter, so decided the discussants. The excuse "too busy" used by some doctors to beg off from community group activity was ridiculed as a "weak smoke screen."

The theme of the general conference on Friday and Saturday was "Widening the Highway to Health." The discussions pointing up this theme covered such subjects as: "The Dentist, Dental Care and the Rural Health Program," "Financing Rural Health Care," "The Missing Item in the Family Budget," "Problems of Rural Health in the South," "Farmers, Farming and Health," "Nutrition for Farm Families," "Huddleston Got a Doctor," "Hospital Relations in the Community," "Scholarship and Placement Programs" and "The Practice of Medicine and Its Problems in a Small Community."

The Conference concluded at a luncheon Saturday noon with the final address being given by Louis H. Bauer, M.D., President, American Medical Association, who spoke on "What Medicine Is Doing."

Members in the News

Stanley L. Goldman, M.D., Kansas City, spoke before the Kansas City Dietetic Society on January 26 on "Allergy and Foods."

Ira H. Lockwood, M.D., Kansas City, discussed "Low Back Pain From the Viewpoint of the Radiologist" at the fifth annual Mid-Winter Radiological Conference sponsored by the Los Angeles Radiological Society on February 21 and 22.

The Missouri Board of Medical Examiners attended a meeting of the Federation of similar boards in Chicago on February 8 to 10. The Missouri board is the first to adopt the multiple choice type of examination and presented a report on its experience with two hundred fifty cases.

The Buchanan County Medical Society, with **H. J. Brumm**, M.D., chairman of the public relations committee in charge, has reactivated a monthly radio program over station KFEQ in St. Joseph.

William A. Staggs, M.D., Kansas City, has been reelected chairman of the Health Unit of the Council of Social Agencies of Kansas City.

Drs. **Fred B. Campbell**, **Ralph R. Coffey**, **Claude J. Hunt** and **George H. Thiele**, Kansas City, attended the sectional meeting of the International College of Surgeons in Dallas, Texas, February 2 to 7. Dr. Campbell was moderator of a panel discussion on "Colon and Rectal Diseases," and Dr. Hunt spoke on "Cancer of the Colon."

Evarts A. Graham, M.D., St. Louis, was presented with the cross of L'Ordre de la Legion d'Honneur at a ceremony at the Washington University School of Medicine on March 6.

Gene B. Starkloff, M.D., St. Louis, spoke before the Jackson County Health Forum in Kansas City on February 18 on "Cancer."

Claude J. Hunt, M.D., Kansas City, will preside as president at the meeting of the American Goiter Association at its meeting in Chicago on May 7 to 9.

Harry B. Stauffer, M.D., Jefferson City, addressed the Escambia County (Florida) Medical Society at Pensacola, Florida, recently. His subject was "The Treatment of Common Eye Injuries."

E. F. Hoctor, M.D., Farmington, was the guest speaker at a recent meeting of the Farmington Rotary Club and spoke on "Understanding Ourselves and Others."

W. A. Bloom, M.D., Fayette, addressed the members of the Alpha Epsilon Delta fraternity at Central College on February 5.

Marvin A. Napper, M.D., Springfield, and **C. W. Meinershagen**, M.D., Jefferson City, spoke before District 14 of the American Cancer Society, Missouri division, held in Springfield on February 9.

F. Stanley Morest, M.D., Kansas City, spoke at a meeting of the Greater Kansas City Industrial Nurses' Association on January 28 on "Acute and Chronic Venous Insufficiency of the Extremities."

Louis H. Forman, M.D., Kansas City, spoke on "Mental Health, a Community Challenge" at a meeting of the Kansas City branch of the National Council of Jewish Women on February 2.

A. W. McAlester, Jr., M.D., Kansas City, celebrated his 77th birthday on February 19 at a dinner party at the University Club given by his son, **A. W. McAlester, III**, M.D., Kansas City.

Harold L. Gainey, M.D., Kansas City, has been elected secretary-treasurer of the Central Association of Obstetricians and Gynecologists.

Evarts A. Graham, M.D., St. Louis, presented the third annual lecture sponsored by the Phi Chi Medical fraternity of St. Louis University School of Medicine on March 4. He spoke on "Some Aspects of Bronchiogenic Carcinoma."

IN MEMORIAM

Baysinger, Stuart L., M.D., Rolla, a graduate of Missouri Medical College, St. Louis, 1890; honor member of the Phelps-Crawford-Dent-Pulaski County Medical Society; aged 84; died January 28.

Smith, Reuben M., M.D., St. Louis, a graduate of Washington University School of Medicine, 1924; member of the St. Louis Medical Society; aged 52; died February 7.

Margulis, Abraham A., M.D., St. Louis, a graduate of Washington University School of Medicine, 1909; member of the St. Louis Medical Society; aged 67; died February 10.

Sherwin, Charles F., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1914; member of the St. Louis Medical Society; aged 68; died February 13.

Dyer, Clyde P., M.D., St. Louis, a graduate of Washington University School of Medicine, 1911; member of the St. Louis County Medical Society; aged 69; died February 19.

Eubank, Ambrose E., M.D., Kansas City, a graduate of the University Medical College of Kansas City, 1901; honor member of the Jackson County Medical Society; aged 75; died February 23.

NEW MEMBERS

Aldrich, James T., M.D., St. Louis.
Amacker, Dempsey T., M.D., St. Louis.
Bauer, John D., M.D., St. Louis.
Cutcliff, Daniel J., M.D., Kansas City.
Davis, Paul A., M.D., Chicago, Illinois.
DeWitt, Robert H., M.D., St. Louis.
Dodge, Milton, M.D., Kansas City.
Drowns, Bruce V., M.D., Kansas City.
Gale, Philip R., M.D., St. Louis.
Haley, Jack A., M.D., Kansas City.
Ibach, Harold F., M.D., Wadsworth, Kans.
Janis, Lee D., M.D., Kansas City.
King, Francis C., M.D., St. Louis.
Lamb, Woodrow, M.D., Hayti.
Lecklitner, Myron D., M.D., Kansas City.
Morley, Louise A., M.D., Kansas City.
Platt, William R., M.D., St. Louis.
Plesons, John D., M.D., St. Louis.
Pugh, Richard G., M.D., Independence.
Rapp, Harold B., M.D., St. Louis.
Roehrs, Marvin E., M.D., Marshall.
Shuford, Wade H., M.D., Richmond Heights.
Sisson, Richard G., M.D., St. Louis.
Stanton, Mearl F., M.D., St. Louis.
Steinberg, Thomas I., M.D., Princeton.
Walters, John H., M.D., St. Louis.
Weaver, John L., M.D., Kansas City.
Wyloge, Elliott I., M.D., St. Louis.

Councilor District News

COUNTY SOCIETY HONOR ROLL—1953

(Societies which have paid dues for all members and date placed on Honor Roll)

Benton County Medical Society, November 18, 1952.
Camden County Medical Society, November 26, 1952.
Webster County Medical Society, December 12, 1952.
Montgomery County Medical Society, December 15, 1952.
Perry County Medical Society, December 16, 1952.
Dallas-Hickory-Polk County Medical Society, December 20, 1952.
Miller County Medical Society, December 22, 1952.
Moniteau County Medical Society, December 27, 1952.
Lewis-Clark-Scotland County Medical Society, January 7, 1953.
Carter-Shannon County Medical Society, January 9, 1953.
Henry County Medical Society, January 9, 1953.
Barton-Dade County Medical Society, January 10, 1953.
Audrain County Medical Society, January 14, 1953.
Clinton County Medical Society, January 29, 1953.
Shelby County Medical Society, February 11, 1953.
Cass County Medical Society, February 12, 1953.
Chariton-Macon-Monroe-Randolph County Medical Society, February 16, 1953.
Holt County Medical Society, March 2, 1953.
Lafayette-Ray County Medical Society—March 2, 1953.
North Central Counties Medical Society—March 5, 1953.

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Clay County Medical Society

The Clay County Medical Society met in regular session at Rugel's Cafe, North Kansas City, on February 24. Dinner was served to the Medical Society and the Auxiliary. Approximately thirty-two members and their wives were present.

Drs. **Robert H. Parker**, **J. E. McCormick** and **R. H. Duncan** were responsible for the scientific program of the evening. They presented **William Cheeseman**, Kansas City, who spoke on "Pulmonary Infection Requiring Surgery."

S. R. McCracken, M.D., *Secretary.*

Grand River Medical Society

H. B. Overesch, M.D., Kansas City, presented the scientific program at the dinner meeting of the Grand River Medical Society at Chillicothe, February 12. He spoke on "Intramedullary Fixation for Fractures of the Staff of the Femur."

The Auxiliary met with the Society for dinner and then took leave for their own meeting.

Meeting of March 12

A signal meeting of the Grand River Medical Society and its Auxiliary was held in Chillicothe, March 12, beginning with a dinner at 6:45 p.m.

J. W. Thompson, M.D., St. Louis, President, Missouri State Medical Association, was present and presented the charter to the Society with some appropriate remarks. He then honored the group by giving the

scientific program of the evening, speaking on "Recent Advances in the Surgical Treatment of Diverticulosis of the Colon."

Mr. Ray McIntyre, Field Secretary, Missouri State Medical Association, was in attendance to see that Dr. Thompson was properly received.

E. A. DUFFY, M.D., *Secretary.*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

The February meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held in Moberly on February 12.

Albert Kuntz, M.D., St. Louis, spoke on "The Clinical Importance of the Sympathetic System."

C. C. COHRS, M.D., *Secretary.*

Marion-Ralls County Medical Society

On Thursday night, February 24, the Marion-Ralls County Medical Society held a dinner meeting at the Mark Twain Hotel, Hannibal. Invitations to attend this session were sent to all members of the Second Councilor District.

The program for the evening was presented by **R. O. Muether**, M.D., St. Louis, who gave a practical, informative discussion on "Diseases of the Liver."

R. J. LANNING, M.D., *Secretary.*

FIFTH COUNCILOR DISTRICT

J. L. WASHBURN, VERSAILLES, COUNCILOR

Audrain County Medical Society

Edward M. Cannon, M.D., St. Louis, spoke at a meeting of the Audrain County Medical Society in Mexico the evening of March 19. He discussed "The Diagnosis and Treatment of Some Common Kidney Diseases."

HARRY F. O'BRIEN, M.D., *Secretary.*

SIXTH COUNCILOR DISTRICT

Johnson County Medical Society

Harry M. Gilkey, M.D., Kansas City, gave the scientific presentation at a meeting of the Johnson County Medical Society in Warrensburg on the evening of February 18.

T. R. MAXSON, M.D., *Secretary.*

Pettis County Medical Society

A dinner meeting of the Pettis County Medical Society was held at the Bothwell Memorial Hospital, Sedalia on February 16. Guests present were members of the Saline and Henry County Medical Societies, and the Councilor of the District, Dr. **R. W. Kennedy**, Marshall, and the Field Secretary of the Missouri State Medical Association, Ray McIntyre. Members from Benton and Johnson County Medical Societies who were also invited were unable to be present.

Mr. McIntyre spoke on the present trend over the state toward the hyphenation of various county medical societies in an endeavor to promote more activity and better programs on the local level. There followed a discussion as to the possibility of combining several societies in this area. A motion was passed that the hyphenation of Henry, Pettis and Saline counties be considered at respective county society meetings and a report on any action taken be forwarded to Dr. Kennedy by March 15.

CARL SIEGEL, M.D., *Secretary.*

EIGHTH COUNCILOR DISTRICT

W. S. SEWELL, SPRINGFIELD, COUNCILOR

Ozarks Medical Society

The Ozarks Medical Society held its February dinner meeting at Aurora on February 10. In addition to doctors' wives, guests for the evening included Dr. **W. S. Sewell**, Springfield, Councilor of the District; Dr. **F. J. Ellis**, Springfield; Mr. Ray McIntyre, Field Secretary, Missouri State Medical Association, and Dr. **Joseph L. Johnston**, Springfield, who spoke on "The Management of Prolonged Labor."

During the business session, a discussion was held relative to inviting other societies in the area to hyphenate with the Ozarks Medical Society. The Society voted to invite members of the Newton County Medical Society and their wives to meet with the Society in March. It was also voted to invite the Missouri Academy of General Practice to furnish one of the scientific programs in the fall of 1953.

ARTHUR A. MICKLE, M.D., *Secretary.*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski County Medical Society

Robert J. Mueller, M.D., St. Louis, spoke at a dinner meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society at Rolla on February 26. He discussed "The Psychoneuroses in General Practice and Their Management." As usual a good turnout of doctors' wives produced a satisfactory attendance of doctors at the meeting.

M. K. UNDERWOOD, M.D., *Secretary.*

South Central Counties Medical Society

The South Central Counties Medical Society met at the West Side Cafe, Houston, on February 18 with the following members and visitors present: Drs. **R. W. Denney**, **S. W. Connor** and **A. C. Ames**, Mountain Grove; **Garrett Hogg, Jr.**, Cabool; **T. J. Burns** and **S. G. Kramer**, Houston; **Leslie Randall**, Licking; **Rollin H. Smith** and **C. F. Callihan**, West Plains; **W. H. Snead** and **Dr. Erin Dillard**, Springfield, and Mr. Goss of the Blue Cross of Springfield, and the wives of several of the doctors.

The application of **Paul A. Davis**, M.D., Chicago, which had been lying on the table since the November

meeting, was taken up and he was elected to membership.

Drs. Snead and Dillard spoke on "The Management of Fractures" and showed films of some interesting cases. They received a vote of appreciation.

The meeting adjourned to meet in Mountain Grove, March 18.

A. C. Ames, M.D., *Secretary.*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Butler County Medical Society

The February meeting of the Butler County Medical Society was held February 18 at the Dunn Hotel, Poplar Bluff, beginning with a dinner at 7:30 p.m. Doctors from Ripley and Wayne counties were invited guests.

Mr. Ray McIntyre, Field Secretary, discussed the advantages and disadvantages of the hyphenation of county medical societies. Following a full discussion of the matter of hyphenation, the Society voted to invite Ripley and Wayne counties, both unorganized, to form a hyphenated society with Butler. A request for approval of such a hyphenation was officially made to Dr. Frank Hall, Cape Girardeau, Councilor of the District, asking that he present it to the Council of the State Association.

Robert E. Engelhardt, M.D., *Secretary.*

Mineral Area County Medical Society

The Mineral Area County Medical Society met at the State Hospital, Farmington, on February 26. The scientific program was presented by Drs. **B. L. Sinner** and **William C. Macdonnell**, St. Louis. Dr. Sinner spoke on "The Diagnosis of Lesions of the Colon Through the Sigmoidoscope" and Dr. Macdonnell discussed "The Medical Management of Colitis." This was a most interesting and practical program.

Byron Taylor, M.D., *Secretary.*

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 **REGISTERED NURSE IN ATTENDANCE** **3456 Lindell Blvd.**

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

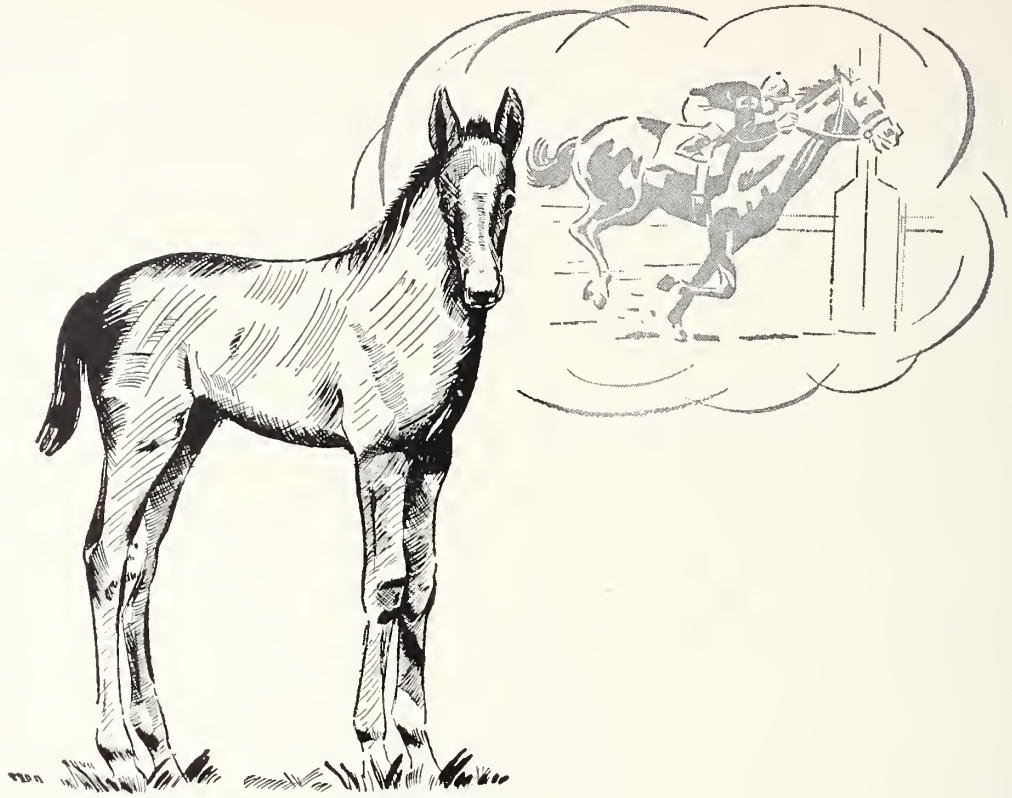
Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

**(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162**

Josef A. Kindwall, M.D.
Carroll W. Osgood, M.D.
William T. Kradwell, M.D.
Benjamin A. Ruskin, M.D.
Lewis Danziger, M.D.
Russell C. Morrison, M.D.
Homer V. Capparell, M.D.
LeRoy E. Bostian, M.D.

G. H. Schroeder, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*



Colt Today
CHAMP TOMORROW

Just as surely as pedigree and training make champions on the race track, so do other factors indicate the future of even small manufacturers of fine pharmaceuticals.

At *thirty years young,* having grown from modest loft quarters to a modern plant and laboratories, we are especially thankful for our *American heritage of free enterprise.*

This and your confidence assure our continued growth.

THE PAUL B. ELDER CO., BRYAN, OHIO
Manufacturers of Fine Pharmaceuticals

MAIL THIS COUPON FOR CATALOG

PAUL B. ELDER COMPANY
BRYAN, OHIO
Please send me your catalog of pharmaceuticals.

Signed_____ M D

Address_____

City_____

MISSOURI STATE MEDICAL ASSOCIATION

The 95th Annual Session of the Missouri State Medical Association will be held in the Municipal Auditorium, Kansas City, April 26, 27, 28 and 29, 1953.

TIME AND PLACE OF MEETINGS

Sunday, April 26

12:30 p. m. Registration. Arena, Municipal Auditorium.
2:00 p. m. House of Delegates. Little Theater, Municipal Auditorium.

Monday, April 27

8:00 a. m. Registration. Arena, Municipal Auditorium.
8:00 a. m. Motion Pictures. Little Theater, Municipal Auditorium.
9:00 a. m. Scientific Session. Little Theater, Municipal Auditorium.
10:00 a. m. Intermission to View Exhibits.
10:30 a. m. Section on Chest Diseases. Room 500, Municipal Auditorium.
10:30 a. m. Section on Obstetrics. Room 600, Municipal Auditorium.
12:00 noon. Round Table Luncheon. Aztec Room, Hotel President.
1:30 p. m. Motion Pictures. Little Theater, Municipal Auditorium.
2:00 p. m. Scientific Session. Little Theater, Municipal Auditorium.
3:30 p. m. Intermission to View Exhibits.
4:00 p. m. House of Delegates. Little Theater, Municipal Auditorium.
6:00 p. m. Fraternity and Alumni dinners and meetings.

Tuesday, April 28

8:00 a. m. Registration. Arena, Municipal Auditorium.
8:00 a. m. Motion Pictures. Little Theater, Municipal Auditorium.
9:00 a. m. Scientific Session. Little Theater, Municipal Auditorium.
10:00 a. m. Intermission to View Exhibits.
10:30 a. m. Section on Metabolic Diseases. Room 500, Municipal Auditorium.
10:30 a. m. Section on Pediatrics. Room 600, Municipal Auditorium.
12:00 noon. Round Table Luncheon. Aztec Room, Hotel President.
1:30 p. m. Motion Pictures. Little Theater, Municipal Auditorium.
2:00 p. m. Scientific Session. Little Theater, Municipal Auditorium.
3:00 p. m. Intermission to View Exhibits.
3:30 p. m. Scientific Session. Little Theater, Municipal Auditorium.
7:30 p. m. Annual Banquet in Honor of Past Presidents. Ballroom, Hotel President.

Wednesday, April 29

8:00 a. m. Registration. Arena, Municipal Auditorium.
8:00 a. m. Three Dimensional Films, Little Theater, Municipal Auditorium.
9:00 a. m. Scientific Session. Little Theater, Municipal Auditorium.
10:00 a. m. Intermission to View Exhibits.
10:30 a. m. Scientific Session. Little Theater, Municipal Auditorium.
1:30 p. m. House of Delegates. Little Theater, Municipal Auditorium.

SCIENTIFIC PROGRAM

Monday, April 27, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Motion pictures. Little Theater, Municipal Auditorium.
J. W. Thompson, M.D., St. Louis, presiding.

9:00 a.m. Functional Disorders of the Bowel, Carl R. Ferris, M.D., Kansas City.

It seems worth while to review the purely functional problems of the intestinal tract. Although not often a serious threat to life, intestinal dysfunctions do cause a great deal of distress and often change in varying degree the course of life. A high percentage of the population suffers from functional disorders of the "bowels." Such functional disorders constitute a large portion of the average physician's practice. The autonomic nervous system is the mechanism through which most of these disorders are produced. These dysfunctions include flatulence, food sensitivity and allergy, diarrhea and constipation and are a challenge to the busy physician.

9:20 a.m. Discussion: Bruce Kenamore, M.D., St. Louis.

9:30 a.m. Therapy of Heart Failure, T. Reid Jones, M.D., Kansas City.

The treatment of congestive heart failure consists essentially of: recognition of the primary cause; recognition of contributing factors; measures to eliminate or control the latter while dealing with the heart failure itself.

Therapy has improved as understanding of physiologic principles has increased.

The long term therapy of chronic or recurrent heart failure must be adjusted to the needs, habits and foibles of the individual patient. Success in treatment depends on attention to the minutiae of rest, drug therapy and sodium control.

The measures ordinarily used in the management of congestive failure are discussed, with attention to their correlation. Emphasis is made throughout on the remediable factors which so often contribute to the failure. Methods of controlling sodium intake and output are considered in some detail, with a view to using them in intelligent combinations.

9:50 a.m. Discussion: Glenn O. Turner, M.D., Springfield.
James W. Allee, M.D., Columbia.
Intermission to View Exhibits.

10:30 a.m. Section on Chest Diseases. Room 500, Municipal Auditorium.
Kenneth Glover, M.D., Mount Vernon, presiding.

10:30 a.m. Newer Chemotherapy of Tuberculosis, Karl H. Pfuetze, M.D., Chicago.

Until recently, streptomycin and para amino-salicylic acid (PAS) administered for prolonged periods was standard treatment for tuberculosis. This is still true. However, the advent of isoniazid has given a new and potent anti-tuberculosis agent. Clinical evidence thus far indicates that it undoubtedly will have an important place in the therapy of tuberculosis. Its present status is discussed, including indications, dosage, toxic manifestations and drug resistance. Its effectiveness alone and in combination with streptomycin and, or, PAS in the treatment of various forms of tuberculosis is considered. Physicians must learn to use this new weapon wisely. Like streptomycin and PAS it is an adjunct—and not a substitute—for other proven measures such as rest, collapse therapy or surgery.

11:00 a.m. Pulmonary Hemorrhage, Thomas H. Burford, M.D., St. Louis.

11:20 a.m. Discussion: Arthur Adelman, M.D., Kansas City.

11:30 a.m. Bronchiectasis, James L. Mudd, M.D., St. Louis.

11:50 a.m. Discussion: A. J. Steiner, M.D., St. Louis.

10:30 a.m. Section on Obstetrics. Room 600, Municipal Auditorium.
Kenneth B. Cox, M.D., Kansas City, presiding.

10:30 a.m. The Management of Eclampsia: A Clinical Evaluation of the Several Therapeutic Schedules, Willis Brown, M.D., Little Rock, Arkansas.

Eclampsia is the final convulsive phase of the hypertensive disorder of pregnancy. Proper prenatal care usually will avoid the appearance of this clinical syndrome.

There are three cardinal symptoms of eclampsia: edema, hypertension and convulsions. A series of clinical experiments were undertaken to control each of these three symptoms. The convulsions were controlled by deep sedation. The hypertension was controlled by Veratrone and other vasodilating agencies. The edema was controlled by diuretic agents.

The lessons learned from these studies have been incorporated into a rational clinical management of this disease.

11:00 a.m. The Diagnosis of Pelvic Tumors, William C. Mixson, M.D., Kansas City.

The patient's clinical history is of the utmost importance in making a differential diagnosis when a pelvic tumor is encountered. Adequate history will also point up other features of the pelvic examination which may give a lead as to the exact diagnosis of the tumor encountered. The usual laboratory procedures aid in the differential diagnosis especially when pelvic inflammation is considered as a possibility. X-ray studies are frequently valuable. Separate consideration will be given to pelvic tumors complicating pregnancy.

11:20 a.m. Extrauterine Pregnancy, Leo J. Hartnett, M.D., St. Louis.

Extra-uterine pregnancy includes tubal pregnancy and abdominal pregnancy. These are two separate clinical entities. Tubal pregnancy is rarely diagnosed before either rupture or abortion occurs. The symptoms are those of acute or subacute hemorrhage. Some cases of tubal abortion occur and are undiagnosed and, if diagnosed, may be left untreated. Surgical interference in tubal rupture or abortion is directed toward the arrest of hemorrhage, and the preservation of the reproductive functions of the patient. Abdominal pregnancy is primary or secondary. Implantation involves invasion of local blood supplies by trophloblastic elements. The duration of the pregnancy depends upon the ability of the invaded circu-

lation to meet the demands of the growing fetus. Fetal death occurs when the demand exceeds the supply. Care must be taken to avoid any separation of the invading trophloblasts from the area blood vessels. One in one hundred cases of abdominal pregnancy come to term.

11:40 a.m. Surgical Complications in Pregnancy, Joseph L. Johnston, M.D., Springfield.

Pregnant women are subject to surgical complications the same as non-pregnant women. In a review of 12,041 pregnancies of private patients from 1939 to 1953, only fifteen cases of extragenital abdominal surgical complications were found. Acute appendicitis occurred in eight cases, intestinal obstruction in five cases and peptic ulcer in two cases. Of these fifteen cases, maternal death occurred in four cases and fetal death in five cases. Surgery was not required in any case of cholelithiasis, cholecystitis or hernia. Emergency surgery during pregnancy should be done without delay but purely elective surgery should be postponed.

12:00 noon. Round Table Luncheon. Aztec Room, Hotel President. Ralph R. Coffey, M.D., Kansas City, presiding.

1:30 p.m. Motion pictures. Little Theater, Municipal Auditorium. Joseph L. Fisher, M.D., St. Joseph, presiding.

2:00 p.m. Management of Chronic Obstruction to the Lymphatic and Venous Channels, Darrell Campbell, M.D., Ann Arbor, Michigan.

When chronic venous and lymphatic obstruction occur as sequelae to acute thrombosis of the deep venous channels, it is called "post thrombotic" or "post phlebitic" syndrome. This syndrome has certain characteristics which allow the diagnosis to be made with ease in the average case. Specialized technics are required in few cases.

The treatment is divided into those with ulceration and without ulceration and those in whom recurrent infection and huge lymphedematous extremities are a prominent feature. Surgical methods are not applicable to all, but in carefully selected cases can do much to rehabilitate these unfortunate patients.

2:30 p.m. Emotional Problems of Childhood: Their Management in General Practice, Cotter Hirschberg, M.D., Topeka, Kansas.

This paper discusses the meaningful role of the physician in dealing helpfully with emotionally disturbed children in his general practice. It considers the various categories of emotional problems of childhood and offers suggestions for the diagnosis of the various types of emotional reactions in children, together with ways for the general practitioner to recognize which problems need referral to the child psychiatrist.

There are, however, many emotionally disturbed children who can be helped by the general practitioner if he uses the parent-child relationship as the basis for his work. Certain problems seen in the parents of emotionally disturbed children are discussed and suggestions made as to ways in which an emotionally disturbed child can be helped through a parent-centered approach. The viewpoint is taken that in a busy general practice more genuine help can be given to certain properly selected emotionally disturbed children by the physician's work with the parents than by any attempt of the physician to carry out psychotherapy with the child himself.

3:00 p.m. Responsibilities of the Medical School to the State It Serves, W. Clark Wescoe, M.D., Kansas City, Kansas.

Each medical school, whether a private corporation or a state supported one, has responsibilities of service to the citizens of its community. The primary function of education must not be lost sight of and service cannot be given at the expense of education.

By combining service with education a great deal can be done. Rural health preceptorships have, for instance, made it possible to attract men into rural communities; these preceptorships must be a part of a general curriculum. It is hoped that the same can be accomplished in the field of mental health. Preceptorships combined with active postgraduate programs serve to attract physicians into a state and to hold physicians already there.

At the present, broad curriculum revisions are being attempted. These will be discussed, particularly in the light of the impact of specialty training upon them. The institution of a thoughtful curriculum, designed to meet the needs of the undergraduate medical student, is perhaps the greatest service a medical school can give.

Intermission to View Exhibits.

4:00 p.m. House of Delegates.

Tuesday, April 28, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Motion pictures. Little Theater, Municipal Auditorium.
J. William Fleming, M.D., Moberly, presiding.

9:00 a.m. The Importance of Anesthesia Technics in the Poor Risk Patient, Charles H. White, M.D., Kansas City.

The anesthesiologist can profoundly reduce the operative morbidity and mortality in the poor risk patient if he considers carefully the technic of his anesthetic administration in five essential categories: (1) preoperative diagnosis with stress on the reversible rather than the irreversible states of the patient; (2) premedication with the least that can be expected to produce the desired results; (3) selection of the agent or method with which one is most familiar as long as that method gives satisfactory depth with minimal aggravation of a disturbed physiology (the tendency is toward balanced or combined methods); (4) supportive therapy to replace loss of fluids and blood as they occur, and (5) immediate postoperative care and treatment of postoperative complications as they apply to anesthesia.

9:20 a.m. Discussion: Russell D. Sheldon, M.D., Kansas City.
Milton H. Noltensmeyer, M.D., Kansas City.

9:30 a.m. Lacerations of the Face: Immediate Care, Douglas Macomber, M.D., Denver, Colorado.

Treatment of facial lacerations becomes the occasional responsibility of every general practitioner. Most adult injuries are the result of automobile, sports and industrial accidents; in children, falls and bites from pets are common causes of more or less serious wounds. Early decision must be made whether or not immediate repair is feasible. About the face abundant circulation permits surgical liberties which might be dangerous in other parts of the body. Small contused wounds may be excised, jagged edges trimmed, local subcutaneous undermining performed to permit closure without tension, or local rotation or sliding of skin flaps when tissue has been lost. Extension or addition of incisions must be made with regard to Langer's lines—"the grain of the skin"—in order to beget minimum scars. In instances in which there is considerable loss of tissue, immediate free skin grafting may be feasible. If prompt repair of extensive wounds about nose or mouth is not possible or feasible, skin and mucosa should be joined about borders of the cavities. No raw surface or edge of a wound need be left unclosed.

In nearly every instance lacerations may be debrided and closed, wounds into nasal or oral cavities repaired or edges salvaged, and large abrasions covered with split skin grafts at least within a few hours. Thus sepsis, deep fibrosis and distortion of features is avoided. Maximum surgical benefit is often the primary result. If secondary revision or reconstruction is indicated, the problems are immeasurably simplified.

Intermission to View Exhibits.

10:30 a.m. Section on Metabolic Diseases. Room 500, Municipal Auditorium.
P. T. Bohan, M.D., Kansas City, presiding.

10:30 a.m. Electrolyte and Fluid Balance From a Practical Standpoint, Harry Statland, M.D., Kansas City.

Since the protoplasm of the individual is literally floating in a sea of fluid and electrolytes, one can well understand the importance of variations in its balance in all fields of medicine and surgery and in practically all diseases. An understanding of the milliequivalent system of terminology is necessary to proper visualization of fluid structure and its alteration. The structure of fluid in the intracellular compartment being different than the extracellular, saline solutions can hardly be an adequate repair solution for intracellular fluid loss. To prevent imbalances, intake of all electrolytes must equal output, and the same applies to fluid. In sick individuals, especially those with heart or kidney disease, and with complex surgery, balances are difficult to manage and serious complications result. A simple system for fluid and electrolyte balance will be described.

10:50 a.m. Discussion: Mark Dodge, M.D., Kansas City.
Robert Bolinger, M.D., Kansas City, Kansas.

11:00 a.m. Differential Diagnosis of Edemas, Jack Hill, M.D., Kansas City.

Edema of the skin and subcutaneous tissues is a sign which occurs most commonly in heart disease, kidney disease, hepatic cirrhosis, pregnancy and hypoproteinemia. Other less common causes of edema are thrombophlebitis, neurologic disorders, anemia, excessive parenteral administration of fluids and overtreatment with cortisone or adrenocorticotropic hormone.

The main factors which govern the formation of edema are the pressure

within the capillaries, the permeability of the capillarics, the colloid osmotic pressure of the blood, the state of the lymph circulation and the status of the electrolyte metabolism. These will be related to each of the diseases characterizd by edema.

Reference will be made to several interesting unusual or rare causes of edema.

11:20 a.m. Discussion: J. Gerard Mudd, M.D., St. Louis.
E. Lee Shrader, M.D., St. Louis.

11:30 a.m. Present Concepts in the Treatment of Hyperthyroidism, Arnold Jackson, M.D., Madison, Wisconsin.

Before considering the method of choice in the treatment of toxic goiter it is essential to have a clear understanding of the two types of hyperthyroidism. A summary of the important differential diagnostic points of toxic diffuse hyperplastic goiter and of toxic nodular goiter is presented. This study is based on personal observation of approximately 10,000 cases of goiter, of which 20 per cent were hyperthyroid.

The indications and the contraindications for the treatment of the two types of toxic goiter are considered, including the use of iodine, the antithyroid drugs, I^{131} and surgery. The treatment of toxic diffuse goiter remains a controversial subject, whereas in toxic nodular goiter surgery is considered the method of choice.

10:30 a.m. Section on Pediatrics. Room 600, Municipal Auditorium.
George V. Herrmann, M.D., Kansas City, presiding.

10:30 a.m. Pediatric Emergencies Arising in the Home, Sydney S. Gellis, M.D., Boston, Massachusetts.

The subject discussed is limited to medical pediatric emergencies which occur in the home. More than 12,000 children die by accidents in the United States each year; accidents account for more children's deaths than do the six most common medical causes of death combined. For this reason any discussion of medical emergencies in the home is closely linked to accidents in and around the home.

The most common medical emergencies confronting the physician consist of convulsions, ingestion of poisons, so-called suffocations and drowning. The handling of these problems is discussed and a program is outlined which can be conducted by any community hospital to aid both physicians and parents in the prevention and treatment of such emergencies.

11:15 a.m. Pediatric Emergencies Arising in the Hospital, Herbert C. Miller, M.D., Kansas City, Kansas.

Emergencies in newborn infants fall into four general groups: (1) those involving respiration, (2) infection, (3) intestinal obstruction and (4) prematurity. Early recognition of difficulty is vital if mortality is to be kept minimal. The clinical and laboratory procedures for early diagnosis are discussed. Treatment for each type of emergency is presented.

12:00 noon. Round Table Luncheon. Aztec Room, Hotel President.
John Growdon, M.D., Kansas City, presiding.

1:30 p.m. Motion pictures. Little Theater, Municipal Auditorium.
Clinton W. Lane, M.D., St. Louis, presiding.

2:00 p.m. Diagnosis in Heart Disease, John Mayer, M.D.; Martin Mueller, M.D.; Bryce Ballard, M.D.; Clark Sealy, M.D.; Blaine Hibbard, M.D., and Edward H. Stratemeier, M.D., Kansas City General Hospital, Kansas City.
Intermission to View Exhibits.

3:30 p.m. Chest Injuries: Diagnosis and Treatment, Ralph A. Dorner, M.D., Des Moines, Iowa.

Chest injuries require a special knowledge for proper treatment since the disturbed physiology accompanying an apparent rather minor wound may result in death if the injury is not properly handled. Some of the more common chest injuries will be discussed, particularly with reference to their diagnosis and treatment. These will include simple fractures of ribs, pneumothoraces, the "stove-in-chest" and hemothoraces. Indications for early tracheotomizing of patients with chest injuries will also be given. Lantern slides emphasizing certain points will be shown.

4:00 p.m. Common Genito-urinary Problems: Their Diagnosis and Treatment. Stoughton White, M.D., Kansas City, Coordinator.
Infections, Irwin S. Brown, M.D., Kansas City.

In present day office and home practice a large number of urinary tract infections are treated. Many cases are entirely cleared up by simple meas-

ures, others have repeated recurrences or do not respond to any of the usual or simple therapeutic measures.

Trauma, John F. Patton, M.D., Denver, Colo.

Carcinoma, William F. Melick, M.D., St. Louis.

Three things in a work-up of a new patient would disclose the vast majority of tumors: (1) periodic and routine rectal examination with careful palpation of the prostate, (2) urinalysis and (3) careful physical examination. Carcinoma of the prostate is the most common cancer of the genito-urinary system, the incidence being reported from 14 to 46 per cent. When a suspicious area is found, either needle biopsy or surgical exposure with frozen sections is indicated. Diagnosis, and treatment are discussed. Other cancers in the genito-urinary tract are discussed as to symptoms, diagnosis and treatment.

7:30 p.m. Annual Banquet in Honor of Past Presidents, Ballroom, Hotel President.

Allan B. Kline, President, American Farm Bureau Federation, Chicago, speaker.

Wednesday, April 29, 8:00 a.m., Little Theater, Municipal Auditorium

8:00 a.m. Three Dimensional Slides.

W. A. Broyles, M.D., Bethany, presiding.

9:00 a.m. Principles of Geriatric Medicine, William B. Kountz, M.D., St. Louis.

The problem of maintaining health in older people is a responsibility of medicine. The problems of the diseases of youth and young adults have been met, to a great extent, which results in an increased number of individuals in midlife and beyond. It is necessary, therefore, for the physician to understand the changes that occur in older people which lead to disease. It has been established that most of the causes of disease of younger individuals are deficiencies of immunity. Likewise, it is known that the cause of disease past midlife is also biological in nature. This biological factor is the result of exhaustion of tissue function which leads to faulty body nutrition. Such tissues as the gastrointestinal tract and the endocrine glands are the ones of concern in the production of disease in the older individual, since the deficiency of these systems leads to a disturbance of nutrition. The maintenance of health by adequate evaluation of food intake as well as the proper protection of systems that become exhausted in older people, such as the endocrine system, will be considered.

9:20 a.m. Discussion: Charles Wilson, M.D., Cape Girardeau.

W. F. Francka, M.D., Hannibal.

9:30 a.m. Medical Aspects of Thyroid Disease, Charles M. Blackburn, M.D., Rochester, Minnesota.

Several different tests of thyroid function are available to the clinician. All have their usefulness, and each tends to disclose a different aspect of thyroid function. Historically, the basal metabolic rate ranks first, and probably is still the most dependable and universally available test extant. In recent years, radioactive iodine has been used both as a diagnostic and as a therapeutic agent in the management of thyroid disease. Its use represents an important step forward in more precise definition of thyroid function and it is invaluable in the study of thyroid disease.

Another more recent test available to the clinician confronted with a difficult diagnostic problem concerning the thyroid gland is the measurement of serum protein-bound iodine which, in most cases, presumably measures the level of circulating thyroid hormone. Determination of the so-called conversion ratio is sometimes helpful. This is a test of the rate at which radioactive iodide is converted to thyroid hormone. The clinical usefulness of the latter two tests has yet to be determined statistically, however.

Intermission to View Exhibits.

M. Pinson Neal, M.D., Columbia, presiding.

10:30 a.m. Sex Hormone Therapy in General Practice, Daniel L. Sexton, M.D., St. Louis.

Because of the great need for replacement treatment, it can be well understood why clinicians greeted sex hormones with overenthusiasm when they first became available. Sex hormone therapy has been employed sufficiently long for an evaluation of its effectiveness. While each case is an individual problem, dosages have been reasonably well standardized. The more common disorders of sex function in both female and male and plan of treatment for each is discussed. The climacteric in the female and its counterpart in the male are reviewed. The controversial subject of the

carcinogenic effect of female hormones as well as the beneficial effect of hormones on the symptomatology of metastatic cancer is discussed. Caution is given against the prolonged and indiscriminate use of sex hormone therapy.

10:50 a.m. Discussion: E. E. Wadlow, M.D., St. Joseph.

11:00 a.m. Panel on Trauma.

Abdominal Injuries, Gene Starkloff, M.D., St. Louis.

Abdominal trauma both penetrating and blunt is a problem of increasing importance in civilian life. This is due to the increase in the amount and speed of modern transportation and a higher incidence of crimes of violence.

During the years 1943 to 1952, 273 cases of abdominal trauma were admitted to the Surgical Service of the St. Louis City Hospital. Experience in the management of these cases forms the basis of this report.

Morbidity and mortality rates are discussed. Selection of anesthesia, methods of combatting shock, the use of diagnostic abdominal tap and selection of cases for drainage or colostomy are presented. The management of injuries of specific organs and problems of technic are discussed. The importance of early exploration is emphasized and supported by mortality figures.

Orthopedic Injuries, W. J. Stewart, M.D., Columbia.

Attention is directed to the desirability of using emergency traction splints properly applied at the time of injuries that occur on the highways or, for that matter, in the home. It is hoped that all highway patrol cars, private and public ambulances, sheriffs' and deputy sheriffs' cars and such in the state will be provided with a set of these splints and the necessary triangular bandages and traction straps to make them effective for injuries of the lower extremities. Injuries of the upper extremities can quite easily be splinted to the trunk in most instances by means of triangular bandages so as to provide safe immobilization while the patient is transported to the hospital for further examination and definitive treatment.

The Joint Committee on Trauma of the American College of Surgeons and the Missouri State Medical Association (Committee on Fractures) has designed this splint packet with the assistance of the Zimmer Manufacturing Company of Warsaw, Indiana, who is marketing this material. In addition, another accessory packet containing sterile army burn dressings, additional sterile gauze dressings and muslin triangular bandages has been worked out by this committee and it is hoped will be supplied to the same vehicles as the splint packet for obvious uses.

Genito-urinary Injuries, James Cope, M.D., Columbia.

The more common genito-urinary injuries are reviewed and their treatment is discussed. Emphasis is placed on points of immediate diagnosis and treatment. Those findings in the preliminary examination which indicate prompt surgical intervention are stressed.

TECHNICAL EXHIBITS

Municipal Auditorium—Kansas City

W. B. Saunders Company, Philadelphia. Booth 2.

The largest individual at the meeting probably will be Seth Melhinch. That will make it easy for you to find the Saunders booth where many new books are on display for your convenient inspection. Among them will be the brand New 1953 "Current Therapy," "Beckman's Clinical Pharmacology," "Parsons & Ulfelder's Atlas of Pelvic Operations," a new "Gifford-Adler's Textbook of Ophthalmology," the new edition of "Clinical Diagnosis by Laboratory Methods by Todd," Sanford & Wells, Lewis' "Practical Dermatology," Alexander's "Treatment of Mental Disorders," and Sheldon, Lovell & Mathews' "Clinical Allergy." Standard works such as Cecil-Loeb's "Textbook of Medicine," Dorland's "Dictionary," Hyman's "Integrated Practice of Medicine," and the "Medical and Surgical Clinics of North America" will, of course, be on display. Please stop by.

Hoffmann-LaRoche, Inc., Nutley, N. J. Booth 4.

Be sure to ask about the new Gantrisin products when you visit the Roche display: Gantricillin tablets—Gantrisin plus penicillin—for oral antibacterial therapy; and Gantrisin Nasal Solution—Gantrisin plus phenylephrine—to treat infection and relieve congestion. Representatives at the Roche booth will be glad to answer questions concerning other Roche products which may be of interest to physicians.

Parke, Davis & Company, Detroit, Michigan. Booth 5.

A cordial welcome awaits you at the Parke-Davis booth. Members of our Medical Service Staff will be on hand to greet you and discuss any of our products in which you may be particularly interested.

G. D. SEARLE & CO., CHICAGO. BOOTH 6.

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Vallestril, the new synthetic estrogen for menopausal symptoms; Banthine, the true anticholinergic drug for the treatment of peptic ulcers; and Dramamine, for the prevention and active treatment of motion sickness.

CHILCOTT LABORATORIES, INC., MORRIS PLAINS, N. J. BOOTH 7.

Research and sales personnel will welcome an opportunity to discuss two new cardiovascular agents: Methium, an oral hypotensive, and Peritrate, for prophylaxis in angina pectoris. Attention is invited to Gelusil, the drug of choice for many years for acid control in peptic ulcer without constipation.

A. H. ROBINS COMPANY, INC., RICHMOND, VA. BOOTH 8.

A. H. Robins Company Medical Service Representatives in attendance at this exhibit welcome the opportunity to discuss the merits of three new Robins products: Mephate capsules, an improved mephensin preparation; Donnatal Plus tablets, providing the Donatal Spasmolytic-sedative formula with the addition of B Complex; and Donnalate tablets, combining Donnatal and Robalate for peptic ulcer therapy.

A. S. ALOE COMPANY, KANSAS CITY. BOOTH 10.

Visit Booth 10 where the Aloe representative will show you a cross section of the complete line of physicians' equipment and supplies carried by the A. S. Aloe Company. Highlighted will be New Model Steeline—tomorrow's treatment room furniture today—featuring the body contour table top, magnetic door catches and advanced design all in new decorators' colors.

TRAVENOL LABORATORIES, INC., MORTON GROVE, ILL. BOOTH 11.

Travenol Laboratories, Inc., will welcome you at the Piromen exhibit. Extensive laboratory and clinical studies have demonstrated the efficacy, reliability and safety of Piromen, a new therapeutic agent. Piromen is a sterile pseudomonas polysaccharide in a colloidal dispersion for parenteral use. Piromen is a stimulant for the endocrine and reticulo-endothelial systems. It has proved its value in the treatment of certain skin disorders, eye disorders, allergies and angioedema and urticaria associated with penicillin reactions.

C. B. FLEET CO., INC., LYNCHBURG, VA. BOOTH 12.

C. B. Fleet Company, Inc., cordially invites you to stop at Booth 12 to see the exhibit of Phospho-Soda (Fleet). Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 gm. and sodium phosphate 18 gm. Phospho-Soda (Fleet), over the years has won discriminating preference by thousands of physicians—because of its controlled action . . . its freedom from undesirable side effect—and its ease of administration. There is only One Phospho-Soda (Fleet).

CAMEL CIGARETTES, NEW YORK. BOOTH 13.

CAMEL Cigarettes will mark your initials on an attractive plastic cigarette case filled with a package of those mild, flavorful Camels. This exhibit features a display of some of the tobaccos used in blending this famous cigarette which leads all other brands by many billions.

THE UPJOHN COMPANY, KALAMAZOO, MICH. BOOTH 14.

The importance of Cortisone is expanding as clinicians discover broadening uses. The scope of its application increases from month to month. The Upjohn Company is justly proud of its part in the development of Cortisone and in its discovery of new production methods. It is our aim to make Cortisone available to ever increasing numbers. Competent representatives welcome your inquiries and discussion.

MERCK & CO., INC., RAHWAY, N. J. BOOTH 15.

Merck & Co., Inc., is featuring Hydrocortone, Cortone, Mephyton, Nalline and other medicinal preparations. Hydrocortone and Cortone are supplied in forms convenient for use in the wide range of their clinical applications: Hydrocortone in tablet form (20 mg.), as saline suspension for intra-articular injection (25 mg. per cc.), as topical ointment for dermatologic use (2.5 per cent) and as dental ointment (2.5 per cent). Cortone is supplied in tablet form for oral administration (5 and 25 mg.), as saline suspension for parenteral use (25 and 50 mg. per cc.), as ophthalmic ointment (1.5 per cent) and in ophthalmic suspension (0.5 and 2.5 per cents). Mephyton is an antidote to anticoagulant induced hypoprothrombinemia. It promptly reverses the prothrombin deficiency induced by coumarin like compounds. Nalline is the first dependable narcotic antagonist. It promptly reverses the respiratory depression that may be produced by morphine or its derivatives as well as meperidene and methadone.

S. H. CAMP AND COMPANY, JACKSON, MICH. BOOTH 16.

S. H. Camp and Company, Booth 16, cordially invites you to visit their exhibit to see the Camp Plastica Orthopraxis appliances of tomorrow. The Plastica Cervical, Taylor and Goldthwaite braces are integrally formed of Plastic. Functionally correct anatomic designs insure improved wearing qualities, rigid support and they are completely washable and all at less cost to the patient than conventional steel braces. Representatives in attendance will be glad to answer questions about Plastica braces and all other Camp Supports.

He Held On All Night

OUT OF THE SPRING NIGHT, the Red banzai attack hit like a thunderstorm. The darkness exploded into a nightmare. But Sergeant Wilson went into action at once, rallying his hard-pressed men.

Bullets disabled both his arms. Refusing aid, he crawled, bleeding, from man to man, supplying ammunition, directing fire, helping the wounded.

As the attack grew fiercer, a mortar shell blew him off his feet. Still, dazed and weakened, he held on, leading the fight all night till the last Red assault was beaten off. At dawn, by sheer courage, the Sergeant had saved not only his position, but the precious lives of his men.

"In Korea," says Sergeant Wilson, "I didn't think about where our weapons came from—I just thanked God they were there.

"Now, back home, I realize what's behind those arms. The united strength of millions of thrifty, hard-working folks like you—who are making America safer by investing in United States Defense Bonds."

★ ★ ★

Now E Bonds pay 3%! Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semiannually when held to maturity! Also, all *maturing* E Bonds *go on* earning—at the new rate—for 10 *more years.*

During April, women volunteers all over America will be calling on business and professional people to enroll them in the Bond-A-Month Plan. If you are self-employed, enroll in the plan—a sure savings system for you!

Peace is for the strong! For peace and prosperity save with U. S. Defense Bonds!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

PHILIP MORRIS & C., LTD., INC., NEW YORK. BOOTH 17.

Philip Morris and Company will show the results of research on the irritant effects of cigarette smoke. These results show conclusively that Philip Morris are less irritating than other cigarettes. An interesting demonstration will be made on smokers at the exhibit which will show the difference in cigarettes.

UNITED MEDICAL EQUIPMENT COMPANY, KANSAS CITY. BOOTH 18.

The new Profexray 300 milliampere, 100 kilovolt motor drive tilt table with the completely automatic control will be exhibited. Also on display will be the Cardiotron—direct-writing electrocardiographic machine—and Raytheon Microwave Diathermy and the portable Meta-Basal.

BROWN & WILLIAMSON TOBACCO CORPORATION, LOUISVILLE. BOOTH 22.

Viceroy—The exclusive Filter Tip on Viceroy Cigarettes provides important protection to smokers. A demonstration and explanation of its unique advantages will be of interest to all.

U. S. VITAMIN CORPORATION, NEW YORK. BOOTH 23.

See the "oil-in-water" demonstration of Liposoluble vitamins A and D made completely water soluble . . . a vitamin technical achievement originated and developed by the U. S. Vitamin Corporation Research Laboratories. Three pharmaceutical firsts . . . Vi-Syneral Vitamin Drops—multivitamins in drops solution; Vi-Syneral Injectable—multivitamin parenteral solution and now Vi-Aquamin—aqueous vitamins and minerals in a single capsule. We cordially invite you to our booth for detailed literature and professional samples.

CIBA PHARMACEUTICAL PRODUCTS, INC., SUMMIT, N. J. BOOTH 24.

Ciba's exhibit, Booth 24, features two new agents for more effective management of hypertensive disorders—Regitine, for simple and accurate diagnosis of hypertension produced by pheochromocytoma—Apresoline, an agent of choice for gradual sustained lowering of blood pressure. You are invited to visit the Ciba booth for literature on Apresoline and Regitine.

WINTHROP-STEARNS, INC., NEW YORK. BOOTH 25.

Winthrop-Stearns, Inc., New York, invite you to visit Booth 25, where the following products are featured—Telepaque, the new, highly effective and well tolerated oral cholecystopaque medium. Gives denser, clear cut pictures of the gall bladder and, in a substantial number of cases, also permits visualization of the biliary ducts; Apolamine, for more efficient control of nausea and vomiting due to pregnancy, radiation sickness, and other causes.

SANDOZ PHARMACEUTICALS, NEW YORK. BOOTH 26.

Sandoz Pharmaceuticals cordially invites you to visit our display at Booth 26. We are featuring new information on certain established products and complete data on Fiorinal—the newest member in our family of ethical specialties in Cephalalgia therapy. Cafergot: the first effective oral therapy for migraine and related vascular headaches—clinically proven in thousands of reported cases since 1949. Bellergal: valuable as an autonomic inhibitor in a variety of functional ills—the volume of favorable clinical reports is constantly increasing. Fiorinal: a new approach to therapy of tension headache and other head pain due to sinusitis and myalgia. A variety of informational brochures will be available and our representatives will be happy to provide full information concerning these and other ethical pharmaceutical products of the Sandoz organization.

GOETZE NIEMER COMPANY, ST. JOSEPH. BOOTH 27.

Our exhibit is featuring nationally advertised brands such as Ritter, Hamilton, Sklar, ACMI, Cutter, Kny-Scheerer, Massillon, Simmons, Davis and Geck and Glasco. Our houses are located, for your convenience, at Kansas City, St. Joseph, Topeka and Joplin.

CARROLL, DUNHAM, SMITH PHARMACAL CO., NEW BRUNSWICK, N. J. BOOTH 28.

KING MERRITT & COMPANY, NEW YORK. BOOTH 31.

Our exhibit will show you the advantages of using Mutual Funds as a medium for the investment of your surplus dollars. It will also show you how you may create an estate through regular monthly deposits invested in Mutual Funds and at the same time protect your dollars against loss of purchasing power through inflation. Our firm has offices from coast to coast and specializes in Mutual Funds.

TATTLE TOES, CHESTERFIELD, MO. BOOTH 32.

Tattle Toes Scientifically Correct Prewalking Shoes represent an entirely new approach to the problem of prewalking footwear. They are different from ordinary shoes in both design and construction. Tattle Toes fit properly without binding the waist of the tiny foot because they are completely adjustable from top to toe. Mother is also provided with a visible line on the insole of the

50 *and six*

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

The

RALPH

SANITARIUM

Established 1897

Ralph Emerson Duncan, M.D.
DIRECTOR

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624

shoe to show when the shoe is outgrown. Never too short, never too tight. They are worth knowing about. See them in Booth 32. Professional samples are available.

Paul B. Elder Company, Bryan, Ohio. Booth 33.

You are cordially invited to visit our booth, No. 33. Among featured products will be Benoquin® our new depigmenting agent, and Lavonex, a new departure in liquid antiseptic soaps. Our representatives hope to add to your enjoyment of the convention and to present some new thoughts for your consideration.

The Borden Company, New York. Booth 34.

Borden representatives will be more than pleased to discuss a new powdered infant food with you. Bremil is a completely new and different modified milk in which nutritionally essential elements of cow's milk have been adjusted to supply the nutritional requirements of infants deprived of human milk. Clinical, x-ray and laboratory evidence with a large group of infants fed exclusively on Bremil proved conclusively its efficacy as an infant food. Bremil is a new phase in infant feeding.

Likewise exhibited will be our long established products for infant feeding: Mull-Soy, Dryco, Biolac, Special Protein, Skimmed and Lactic Acid Milks, general purpose Klim and Beta Lactose.

E. R. Squibb & Sons, New York. Booth 35.

New Squibb products, and new brochures of useful interest to you on products already introduced, are featured at Booth 35. As in former years, your Squibb representative again cordially invites you to visit the Squibb booth.

Eli Lilly and Company, Indianapolis. Booth 36.

You are cordially invited to visit the Lilly exhibit located in Booth 36. New antibiotics, cardiac drugs and antihistamines are featured in the display. Lilly medical service representatives will welcome your questions about these and other recent therapeutic developments.

Medco Products Co., Tulsa. Booth 37.

The Medcolator Stimulator, for the stimulation of innervated muscle or muscle groups ancillary to treatment by massage, is a low volt generator that will generate plenty of your interest. Electrical muscle stimulation is a valuable form of rehabilitation therapy. Be sure to visit our booth for a personal demonstration.

Lanteen Laboratories, Inc., Evanston, Illinois. Booth 38.

Lanteen Medical Laboratories, Inc., cordially invite you to visit their exhibit in Booth 38. The well known line of Lanteen Gnyecic Specialties will be available for discussion.

The Dairy Council of Kansas City, Kansas City. Booth 39.

The exhibit of the Dairy Council of Greater Kansas City is an electrical exhibit displaying the importance of nutrition to health. It also includes a display of Dairy Council health education materials. These materials carry the approval of the American Medical Association and have been proclaimed by outstanding physicians as excellent reference materials and information material for patients. Please visit our exhibit during the meeting.

Zimmer Manufacturing Company, Warsaw, Indiana. Booth 40.

Audiphone Company of Kansas City, Inc., Kansas City. Booth 42.

Producers Creamery Company, Springfield, Missouri. Booth 43.

The Daricraft Evaporated Milk exhibit features an information service about the processing of evaporated milk and its use in infant feeding and difficult feeding cases. In addition, a selection of convenient office forms, which are available without charge for the doctors' use, are on display. Daricraft representatives Delbert O. Inman and Chester H. Bruce are present at the Daricraft booth to welcome you.

Eisele & Company, Nashville, Tenn. Booth 44.

Eisele and Company is displaying their regular line of clinical thermometers, hypodermic syringes, both the regular type and the interchangeables; hypodermic needles, Eco bandages and specialty glassware.

Sealy Mattress Company, Kansas City. Booths 45 and 46.

J. B. Lippincott Company, Philadelphia. Booth 47.

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

Eaton Laboratories, Inc., Norwich, N. Y. Booth 48.

For rapid, painless, topical antibacterial therapy, Furacin is now available in a new dosage form: Furacin Soluble Powder. This is designed for application

TAKE ADVANTAGE OF YOUR LOCAL SANBORN SERVICE STATION

It stands ready to provide you with

- expert technician service on all Sanborn instruments
- emergency loan Sanborn instruments
- complete stocks of daily-use supplies and accessories

and to demonstrate

THE SANBORN VISO CARDIETTE

today's foremost electrocardiograph

Your local Service Center is:

SANBORN COMPANY *Branch Office*
634 North Grand Boulevard
St. Louis, Mo., *Phone* Lucas 7740

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

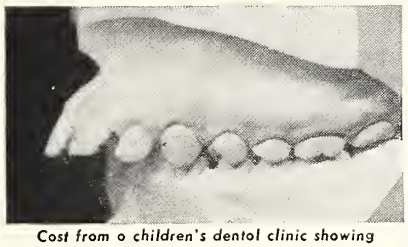
PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures *"know-how"*

ST. LOUIS Office:
T. E. Mentzer, Rep.,
3738 Wash. Blvd., Tel. Newstead 8363

KANSAS CITY Office:
Robert M. Childers, Rep.,
1319 West 44th Terrace Apt. 106
Telephone Jefferson 2910

RECENT DENTAL LITERATURE ADVOCATES BAN ON THUMB SUCKING AND NAIL BITING



Cast from a children's dental clinic showing malocclusion due to thumb sucking

Authorities show developmental defects in dental occlusion when vicious habits are not treated. Children and adults alike are subject to these injurious mouth habits.

Nagging and rebuke are psychologically unsound and serve only to focus attention on the habit. For efficient treatment on a reflex basis, prescribe

Order from your pharmacist

Contains: Oleo Resin Capsicum, Aloe, Benzoin, Storax, Tolu Balsam, Soluble Pyroxylin and Alcohol 4.75%

BAN

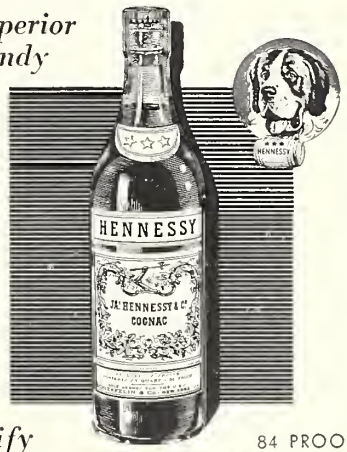
ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Professional samples available. WRITE TO:

PUREPAC CORPORATION
511 East 72nd Street • New York 21

In very special cases

A very superior Brandy



Specify 84 PROOF

★ ★ ★

HENNESSY

THE WORLD'S PREFERRED
COGNAC BRANDY

For a beautifully illustrated book on the story of Hennessy, write—

Schieffelin & Co., Dept. HT, 30 Cooper Square, N. Y. 54

on wounds, burns, ulcers, otitis and vaginitis. Demonstration of its administration from powder insufflators will be made. When pregnancy is contraindicated, Lorophyn Suppositories offer and effective, simple technic.

M & R LABORATORIES, COLUMBUS, OHIO. BOOTH 49.

Your Similac representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of Similac in infant feeding. They have for you the latest Pediatric Research Conference Reports. Also available are current reprints of pediatric nutritional interest.

THE S. E. MASSENGILL COMPANY, BRISTOL, TENN. BOOTH 50.

The Massengill exhibit displays Aminodrox, the tablet that makes it feasible to use oral aminophylline therapy in bronchial and cardiac asthma or angina pectoris. Other specialties also are on display.

CHICAGO PHARMACAL COMPANY, CHICAGO. BOOTH 51.

Chicago Pharmacal Company (Chimedic) welcomes your visit to our Booth 51, which features the following specialties of one of the most complete lines in the country. Urised, nationally known antiseptic and sedative tablet for effective relief in all types of genito-urinary infections; Tolyspaz and Tolyphy for the most effective muscle relaxation known to date in tablet and liquid form; plus a complete injectable line, headed by Bexii-M and Bexiifort, containing respectively, 1000 mcgm. (1 mg.) Vitamin B 12, Crystalline, U.S.P. per cc. and 100 mcgm. Vitamin B 12, Crystalline, U.S.P. per cc.

BROOKS APPLIANCE COMPANY, CHICAGO. BOOTH 52.

The Brooks Appliance Company will exhibit and describe in detail the technic of applying the combination pressure bandages. The moist medicated Primer plus the Elastic Adhesive Dalzoflex which are used in treating leg ulcers and phlebitis. Elastic Stockings, the Nulast Elastic Crepe Bandages and Surgical Instruments also are displayed.

DOHO CHEMICAL CORPORATION, NEW YORK. BOOTH 53.

Doho Chemical Corporation is pleased to exhibit Auralgan, the ear medication for the relief of pain in Otitis Media and removal of Cerumen; Rhinalgan, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged; and the New Otosmosan, the effective, nontoxic ear medication which is Fungicidal and Bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears. Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring Rectalgan, the liquid topical anesthesia, also Bactericidal and Fungicidal for control of secondary invaders, particularly recommended for treatment of mold infections (monilia) occurring after antibiotic therapy; also for relief of pain and discomforture in hemorrhoids, pruritus and perineal suturing.

GENERAL ELECTRIC COMPANY, X-RAY DEPARTMENT, KANSAS CITY. BOOTH 55.

WM. P. POYTHRESS & CO., RICHMOND, VA. BOOTH 56.

Trocinate, the potent antispasmodic without side effect, is featured at the Poythress exhibit. Physicians attending the Session are cordially invited to visit Booth 56 where literature, trial packages and information on Trocinate, Solfoton, Panalgesic and other Poythress specialties will be made available by Mr. G. G. Thomas and Mr. J. A. Hohl.

PET MILK COMPANY, ST. LOUIS. BOOTH 57.

Specially trained representatives will be in attendance to discuss the use of Pet Milk in infant feeding, and the time-saving Pet Milk services that are available to physicians. Miniature Pet Milk cans will be given to visitors at the exhibit.

MEAD JOHNSON & COMPANY, EVANSVILLE. BOOTH 58.

THE MEDICAL PROTECTIVE COMPANY, FORT WAYNE. BOOTH 59.

The "Know-how" in Defense and proven Protection against loss that has made The Medical Protective Company preeminent in the professional liability field through more than half a century now adds new luster to the company's time tested individual plan of professional protection in the face of severe underwriting difficulties prevailing elsewhere. Authoritative answers to questions arising out of the Doctor-Patient relationship may be had at Booth 59 from representatives with special training and long experience in this unique field.

DUMAS-WILSON & CO., ST. LOUIS. BOOTH 60.

Dumas-Wilson & Co. extends a cordial invitation to the physicians attending this annual session to visit our booth featuring several new specialty items of interest to the specialist as well as the general practitioner.

P. LORILLARD COMPANY, NEW YORK. BOOTH 62.

P. Lorillard Company, manufacturers of Old Gold and Embassy Cigarettes as well as Briggs Pipe Mixture and other famous tobacco products, will exhibit and demonstrate their new Kent Cigarette with the exclusive "Micronite Filter" which takes out up to seven times more nicotine and tars than any other leading filter cigarette.

Irwin, Neisler & Company, Decatur, Ill. Booth 63.

We, of Irwin, Neisler & Company believe that new drugs should not only pass the most rigid experimental and clinical tests, but should also prove practical for the day to day practice of medicine. At Booth 63, you will find new and improved practice proven products for the management of cardiovascular disease, heart disease, bronchial asthma, obesity and other conditions with which you are confronted daily. Won't you stop by?

O'Connell Bros., Inc., St. Louis. Booth 64.

The O'Connell Bros. invite all members of the Missouri State Medical Association to call at Booth 64, rest those "convention feet" and discuss their latest pharmaceutical preparations. Joe and Bill will be on hand to welcome you and look forward to being of service.

Ames Company, Inc., Elkhart, Indiana. Booth 65.

Apamide—prescription analgesic—antipyretic (N-acetyl-p-aminophenol) of rapid and prolonged action. Apromal—non-narcotic, nonbarbiturate sedative (acetyl-carbromal) plus N-acetyl-p-aminophenol. Decholin Sodium is foremost in combatting serum sickness type penicillin reactions. Dramatic patient relief has been noted within a few hours after intravenous Decholin Sodium, followed by adequate oral Decholin.

Brown & Williamson Tobacco Corporation, Louisville. Booth 66.

Kool—Mildly mentholated Kool Cigarettes are particularly desirable for smokers with sensitive and irritated throats. Willie the Penquin has an attractive souvenir for all doctors who visit the Kool booth.

Baby Development Clinic, Chicago. Booth 67.

To aid Maternity Patients demonstration samples and literature concerning carefully selected supportive brassieres and sashes. Demonstration material on feeding including Evenflo bottles, nipples and brushless cleanser. Manual: simple, direct, cheerful, authoritative helps parents prepare for coming baby. Film strips, slides and outlines for parents' classes.

Chas. Pfizer & Co., Inc., Brooklyn. Booth 68.

Terramycin, newest of the broad spectrum antibiotics forms a dramatic central feature of the display of Chas. Pfizer & Co., Inc. The newest dosage forms of Terramycin are exhibited and indications for use are described.

The Coca-Cola Company, Atlanta, Ga. Booth N.

Ice cold Coca-Cola served through the cooperation and courtesy of the Kansas City Coca-Cola Bottling Company and The Coca-Cola Company.

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WIlson 9258

Rx Zemmer

PHARMACEUTICALS

A complete line of laboratory controlled ethical pharmaceuticals. Chemists to the Medical Profession since 1903. Mo. 4-53

THE ZEMMER COMPANY, Pittsburgh 13, Pennsylvania

LEGISLATION

The Missouri Legislature, by the time this is published, will have completed three months in session. Since only two months remain of its alloted time, the Legislature necessarily must work more quickly than usual in order to complete its work. The Assembly is required by the Constitutional Amendment adopted November 4, 1952, to adjourn *sine die* five months after regular sessions are begun.

Many bills affecting public health and the practice of medicine have been offered. The more important of these are analyzed and the present status of the bills is given. Members are urged to discuss the proposed legislation with their Senators and Representatives in order that the views of the profession may be considered.

H. B. 276. Provides for the creation of a State Board of Naturopathic Examiners; defines Naturopathy as a system of diagnosis and treatment for the prevention, alleviation and correction of human ailments by use of natural methods consisting of physiotherapy, manual or mechanical manipulation, the proper use of diet, minerals, vitamins and other substances found in the human body to assist nature in resisting and overcoming human ailments, diseases and physical conditions. In House Committee on Public Health.

H. B. 73. Provides that St. Louis County shall have the right to levy a tax of 10 cents on the $100 property valuation for public health purposes. In House—Do Pass.

H. B. 108. Provides that any person entitled to old age assistance, who requires treatment according to certification of a licensed physician, osteopath, chiropractor or Christian Science Practitioner, shall receive in addition to usual pension, a sum up to $100 per month, if such person is confined to a hospital or nursing, rest or boarding home. In House Committee on Social Security.

H. B. 109. Provides for licensing by the State, of nursing, rest or boarding homes, except those where the treatment provided is solely by prayer or spiritual means. In House—Do Pass.

H. B. 184. Provides for changes in Workmens Compensation Act so that injured employee would have free choice of physician. It also contains a provision regarding treatment by prayer or spiritual means. In House Committee on Workmens Compensation.

S. B. 165. Changes State Board of Nursing to include two practical nurses, also provides for licensing of practical nurses on a voluntary basis. (Endorsed by Council of Missouri State Medical Association). Passed Senate on March 10, now in House.

S. B. 224. Provides for injunction against those practicing a profession without a license. (Endorsed by Council of Missouri State Medical Association.) In Senate Committee on Judiciary.

S. B. 237. Provides for performance of autopsies and outlines how consent for such procedures shall be obtained. (Endorsed by Council of Missouri State Medical Association). In Senate—Do Pass.

S. B. 69. Provides that non-profit Blue Cross and Blue Shield plans shall be under jurisdiction of State Insurance Department. In Senate Committee on Public Health.

S. B. 229. This bill also provides that non-profit Blue Cross and Blue Shield Plans shall be under jurisdiction of State Insurance Department. In Senate Committee on Public Health.

H. B. 82. Provides a code of operation for all not for profit corporations, including Blue Cross-Blue Shield Plans. (Endorsed by Council of Missouri State Medical Association.) Passed House, now in Senate Committee on Judiciary.

ST. JOSEPH CLINICAL SOCIETY

The St. Joseph Clinical Society will hold its 1953 spring session on April 9, at St. Joseph during the afternoon and evening.

The afternoon session will be: "Recent Investigations of New Insulin Preparations," W. R. Kirtley, M.D., Medical Department, Eli Lilly and Company; "Blood Transfusions," Robert C. Hardin, M.D., Associate Professor of Medicine, University of Iowa Medical School, Iowa City, Iowa; "Some Considerations of Cardiac Surgery With Special Reference to the Intracardiac Procedures," William W. L. Glenn, M.D., Associate Professor of Surgery, Yale University Medical School, New Haven, Conn., and "Surgical Treatment of Arthritis of the Hips," William Bickel, M.D., Associate Professor of Orthopedic Surgery, Mayo Foundation, University of Minnesota.

The evening program will be: "The Gamut of Neurosurgery," Henry G. Schwartz, M.D., Professor of Neurological Surgery, Washington University School of Medicine, St. Louis, and "The Physicians Responsibility in Cancer Detection," Terry E. Lilly, Jr., M.D., Kansas City.

No registration fee will be charged and credit for attendance is given by the Academy of General Practice.

FINANCIAL STATEMENT FOR 1952

LENNERTSON AND COMPANY
CERTIFIED PUBLIC ACCOUNTANTS

ROBERT A. LENNERTSON, C. P. A.
MEMBER—AMERICAN INSTITUTE OF ACCOUNTANTS
HOWARD E. SALOMO, C. P. A.
SAINT LOUIS, MISSOURI

March 2, 1953

Missouri State Medical Association
634 North Grand Boulevard,
St. Louis, Mo.
Gentlemen:

An examination has been made of the books and records of the Missouri State Medical Association for the year 1952 and a report is presented thereon together with the following attached statement:

Exhibit A Balance Sheet.
Exhibit B Income Statement.
Exhibit C Statement of Committee and Meeting Expense.
Exhibit D Dues Receivable and Membership by Counties.

In connection with the statements, it should be noted that members' dues and assessments are taken into income on the cash basis whereas all other accounts are maintained on the accrual basis.

Scope of Examination

The Balance Sheet as at December 31, 1952 and the Income Statement for the year 1952 were reviewed. Examinations or tests were made of the accounting records, in the manner and to the extent deemed appropriate, but a detailed audit of the transactions was not made.

Cash in banks as shown by the books was reconciled with the regular monthly bank statements and confirmation letters received direct from the depositories. The petty cash fund of $25.00 and United States 2½% Savings Bonds Series G with a par value of $55,000.00 were verified by physical inspection. Bond interest in the amount of $1,375.00 has been properly accounted for on the books. Recorded cash receipts for the year were traced in total into the bank accounts as deposits and disbursements were substantiated by an inspection of paid checks, purchase invoices and other data on file. Selective tests were made of the income and expense accounts for the period. It was noted that space was contrib-

uted by the Journal for advertising by the U. S. Treasury in connection with Defense Bonds.

Income Statement

The financial result of the Association's activities for the year 1952 was an excess of expenses over income in the amount of $15.84 as set forth in Exhibit B. It should be noted that special assessments for the year 1951 in the amount of $2,840.00 were collected and taken into income in the current period.

Legal expense in the amount of $1,114.76 was paid in connection with the Audrain County Hospital suit in which the Missouri State Medical Association is named as a codefendant.

Balance Sheet

The asset and liability accounts of the Association at December 31, 1952 are presented in Exhibit A, and comments follow on certain Balance Sheet items not previously discussed.

Accounts receivable from Journal advertisers are summarized below as to date of charge:

Month of Charge	*Amount*
December 1952	$1,548.60
November 1952	26.45
October 1952	23.45
Prior	226.65
Total	$1,825.15

Account Receivable, Other, in the amount of $50.00 represents the overpayment of a creditor's account.

Unpaid Dues and Assessments in the amount of $2,292.50, offset by a reserve account in like amount, represents $922.50 of 1952 dues of delinquent members carried at December 31, 1952 at the request of the local societies and $1,370.00 of unpaid 1951 assessments. Other members, with delinquent dues at the end of the year, were dropped from membership in accordance with the by-laws. A summary of unpaid dues and special assessments and a schedule of membership by counties, as shown by the records, is presented in Exhibit D. Dues for the year 1953 have been increased to $25.00 for active members and $12.50 for junior members. Prepaid dues at December 31, 1952 includes collections at the new rates.

Furniture and Fixtures are stated in the fixed amount of $1,000.00. Purchases during the year have been charged to expense in lieu of depreciation.

Records and data on file were carefully reviewed for liabilities at December 31, 1952 and it is believed that all current liabilities of substantial amount are included in the Balance Sheet. There is a contingent liability in the amount of $900.00 on three malpractice suits reported pending against members. The Association is required to furnish assistance in an amount not to exceed $300.00 in each case, under the provisions of its by-laws.

Advance payments in the amount of $2,730.00 were made by exhibitors in 1952 for exhibit space at the 1953 annual session and these payments will be taken into income when earned in 1953.

General

The following insurance was in force at the close of the year:

Insurance on	*Type of Coverage*	*Amount*
Furniture and Fixtures	Fire and Extended Coverage	$2,000.00
Employees	Workmen's Compensation	Statutory
Lessee's Liability	Bodily Injury	25/50,000.00
Treasurer	Fidelity Bond	20,000.00
Executive Secretary	Fidelity Bond	1,000.00
Employee	Life Insurance Policy with Disability Benefits (Cash Value $7,214.76)	12,000.00
Automobiles of Executive Secretary and Field Secretary	Non-ownership—Bodily Injury	25/50,000 00
	Property Damage	5,000.00

The Missouri State Medical Association is named as a codefendent in the Audrain County Hospital suit. The decision reached by the lower court and upheld by the Court of Appeals is to be carried to the State Supreme Court. The office of the Executive Secretary advises that all bills rendered to December 31, 1952 for legal services have been paid.

The examination for the year 1952 disclosed that the records of the Association were well maintained in conformity with generally accepted accounting principles, applied on a basis consistent with that of the preceding period.

Yours very truly,
LENNERTSON & COMPANY,
Certified Public Accountants.

EXHIBIT A

Missouri State Medical Association
Balance Sheet, December 31, 1952

Assets

Cash:		
Mercantile Trust Company (Treasurer's Account)		$23,859.49
Mercantile-Commerce National Bank (Secretary's Account)	431.61	
Petty Cash Fund	25.00	$24,316.10
U. S. Savings Bonds*—Series G 2½%—Cost and Par Value		55,000.00
Accounts Receivable:		
Advertisers	$ 1,825.15	
Other	50.00	1,875.15
Dues and Assessments Receivable—Exhibit D:		
Dues	$ 922.50	
Assessments	1,370.00	2,292.50
Furniture and Fixtures		1,000.00
		$84,483.75

Liabilities

Accounts Payable:		
Supplies and Expenses	$ 1,803.30	
Payroll Taxes	582.19	$ 2,385.49
Deferred Credit to Income:		
Advance Payments by Exhibitors		2,730.00
Contingent Liability to Members on Three Malpractice Suits—$900.00		
Reserve for Uncollected Dues and Assessments		2,292.50
Reserve for Future Activities:		
Balance January 1, 1952	$77,091.60	
Excess of Expenses over Income for the year 1952 (Exhibit B)	(15.84)	77,075.76
		$84,483.75

* Maturing	1955	$ 5,000.00
	1957	15,000.00
	1958	25,000.00
	1959	10,000.00
Total		$55,000.00

EXHIBIT B

Missouri State Medical Association
Income Statement for the Year 1952

Particulars	General Activities	JOURNAL Publication	Total
INCOME			
Dues Received (includes $1.00 per member annually for The JOURNAL)	$44,750.00	$ 3,125.00	$47,875.00
Assessments (year 1951)	2,840.00		2,840.00
Rentals—Annual Session Exhibit Space	9,600.00		9,600.00
Subscriptions to THE JOURNAL—Non-members		241.70	241.70
Advertising Space—The JOURNAL		23,729.49	23,729.49
Interest on U. S. Savings Bonds	1,375.00		1,375.00
Collection Fees on A. M. A. Dues	679.48		679.48
Total Income	$59,244.48	$27,096.19	$86,340.67
EXPENSES			
Salary—Executive Secretary	$ 4,966.67	$ 2,483.33	$ 7,450.00
Salary—Treasurer	1.00		1.00
Office Salaries	15,122.50	7,561.27	22,683.77
Employee's Retirement Insurance Premium	929.40		929.40
Office Rent and Light	2,749.80		2,749.80
Postage	2,061.20	582.68	2,643.88
Stationery, Printing and Office Supplies	1,617.47		1,617.47
Directories and Clipping Service	151.70		151.70
THE JOURNAL—Paper, Printing, etc.		21,377.21	21,377.21
Cash Discounts to Advertisers		14.87	14.87
Commissions on JOURNAL Advertising		2,266.00	2,266.00
Discounts to Exhibitors	15.00		15.00
Telephone and Telegraph	1,609.70		1,609.70
Insurance—General	129.64		129.64
Fees and General Expenses	1,187.93		1,187.93
Taxes — Social Security and Person Property	306.84		306.84
Traveling Expense—Executive Secretary	1,073.68		1,073.68
Traveling Expense—Field Secretary	1,742.70		1,742.70
Traveling Expense—General	440.47		440.47
Committees and Meeting Expenses (Exhibit C)	16,453.54	24.82	16,478.36
Equipment Purchases and Repairs in lieu of Depreciation	361.83		361.83

Bad Debts		10.50	10.50
Legal Expense	1,114.76		1,114.76
Total Expenses	$52,035.83	$34,320.68	$86,356.51
Net Income or (Loss) for the Period	$ 7,208.65	$(7,224.49)	$ (15.84)

EXHIBIT C

Missouri State Medical Association
Statement of Committee and Meeting Expenses for the Year 1952

Annual Session		$ 6,763.74
Council Meetings and Councilor's Expenses	$ 2,403.34	
Delegates to A. M. A.	729.20	
Women's Auxiliary	675.51	
Committee on Emergency Medical Service	166.72	3,974.77
Committees:		
Conservation of Eyesight	$ 17.91	
Rural Medicine	259.25	
Health and Public Instruction	374.60	
Public Policy and Relations	3,986.10	
Scientific and Post-graduate Work	405.35	
Tuberculosis	30.28	
Infant Care	46.12	
Constitution and By-laws	320.06	
Maternal Welfare	30.65	
Medical Economics	95.52	
Alcoholism	15.00	
Cardiac Disease	126.06	
Control of Venereal Disease	8.13	
Sub-total	$ 5,715.03	
Publication Committee	24.82	5,739.85
Total		$16,478.36

EXHIBIT D

Missouri State Medical Association
Dues Receivable and Membership by Counties December 31, 1952

Counties	Membership Total	Active	Junior	Honor	Unpaid Dues 1952 (A) Regular	1951 (B) Special	Prepaid Dues
Andrew	5	5			$ 15.00		
Audrain	13	10	1	2			
Barton-Dade	10	7		3			$ 150.00
Bates	12	10	2				
Benton	3	1		2			25.00
Boone	59	53	2	4	52.50	10.00	7.50
Buchanan	101	81	4	16			
Butler	31	26	3	2	30.00		410.00
Butler							12.50*
Callaway	19	14		5			
Camden	1	1					50.00
Cape Girardeau	46	38	2	6		20.00	
Carter-Shannon	3	2		1			40.00
Cass	14	10	1	3			
Chariton Macon-Monroe-Randolph	39	29	1	9			15.00
Clay	37	36	1				325.00
Clinton	6	4	1	1			
Cole	40	38	1	1	15.00		110.00
Cooper	16	16			15.00	10.00	
Dallas-Hickory-Polk	9	8		1			200.00
Dunklin	26	21	2	3	22.50	30.00	300.00
Franklin-Gasconade-Warren	28	26	1	1	15.00		
Grand River (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	60	47	4	9	37.50	30.00	375.00
Greene	133	116	8	9	45.00	20.00	
Henry	13	11	1	1			
Holt	3	3					
Howard	8	7	1				137.50
Jackson	687	560	39	88	90.00	30.00	
Jasper	78	60	3	15	15.00	10.00	
Jefferson	16	15		1	15.00		
Johnson	14	12	2				
Laclede	14	14					
Lafayette-Ray	25	19	2	4			
Lewis-Clark-Scotland	4	4					
Lincoln	6	3	1	2			50.00
Lincoln							12.50*
Marion-Ralls	30	22	1	7			
Miller	3	3					75.00
Mineral Area (St. Francois-Iron-Madison-Washington-Reynolds-St. Genevieve)	33	30		3	30.00	30.00	
Moniteau	6	5		1			125.00
Montgomery	4	3		1			75.00
Morgan	4	2	2				75.00
Newton	12	12				10.00	
Nodaway-Atchison-Gentry-Worth	23	21	1	1	22.50		
North Central (Adair-Schuyler-Knox-Sullivan-Putnam)	18	8		10			
Ozarks (Barry-Lawrence-Stone-Christian-Taney	38	31	1	6			
Pemiscot	19	12	4	3	15.00		237.50
Pemiscot							25.00*
Perry	9	7		2			125.00
Perry							37.50*
Pettis	31	23	2	6			
Phelps-Crawford-Dent-Pulaski	26	21	3	2	15.00	20.00	
Pike	12	6	2	4			
Platte	9	6	2	1	22.50		
St. Charles	24	21	2	1			
St. Louis Medical Society	1,288	1,084	110	94	345.00	1,070.00	232.50*
St. Louis County	326	289	16	21	30.00	40.00	7.50*
Saline	21	19	1	1	60.00		
Semo (Stoddard-New Madrid-Mississippi-Scott	43	39	2	2	15.00	20.00	
Shelby	2	2					
South Central (Howell-Oregon-Texas-Wright-Douglas)	26	21	2	3		10.00	
Vernon-Cedar	17	13	2	2		10.00	
Webster	4	3	1				87.50
Totals	3,607	3,010	237	360	$922.50 (A)	$1,370.00 (B)	$3,322.50

(A) Delinquent 1952 dues of members carried at December 31, 1952 at the request of local societies.
(B) Unpaid 1951 special assessments at December 31, 1952.
(*) New members—payments received from applicants in 1952 for membership effective January 1, 1953.

Budget for 1953

Salaries	$ 32,100.00
JOURNAL Expense	24,340.00
Postage, Printing and Stationery	4,000.00
Travel, Executive Secretary	1,300.00
Travel, Field Secretary	2,800.00
Telephone and Telegraph	1,500.00
Office rent and light	3,000.00
Meetings and Committee expense	14,000.00
Defense	500.00
Scientific and Postgraduate Work	1,000.00
Woman's Auxiliary	775.00
Public Relations	7,500.00
Insurance annuities	2,754.00
Miscellaneous general expense	2.600 00
Furniture and fixtures	1,500.00
Social Security Tax	425.00
Total	$100,094.00

BOOK REVIEWS

AMBULATORY PROCTOLOGY. Second Edition, Revised, by Alfred J. Cantor, M.D., Proctologist, Kew Gardens General Hospital, Long Island, New York. With a Foreword by Beaumont S. Cornell, M.D., Editor, American Journal of Digestive Diseases. Paul B. Hoeber, Inc. Medical Book Department of Harper & Brothers. Price $10.00.

This book is such a well written, readable coverage of most of the field of proctology that one may question the term "ambulatory." To quote the author: "Ambulatory proctology is the diagnosis and treatment of diseases of the anus, rectum and sigmoid bowel without confining the patient to bed. The

treatment may be medical or surgical, conservative or radical. Thus, if a proctologist excises a polonidal cyst, performs an extensive hemorrhoidectomy, or amputates a rectal prolapse, and then returns that patient to his home, although not necessarily to bed, that case has been treated by ambulatory proctology."

He also states that since publication of the first edition five years ago, the experience of many proctologists and the literature have amply confirmed the basic concept of immediate ambulation following surgery. Indeed this concept has spread to all other fields of general surgery. Early ambulation is now a standard recognized procedure in the management of major surgical problems. In this edition the physiology of immediate ambulation is explained in its clinical application.

This book is well outlined and only the essentials of embryology and anatomy are included. It is also practical, for most of the newer and accepted forms of treatment are given in a usable form. The chapter on pediatric proctology is especially well written in a concise, informative style with good illustrations. This book should prove to be a valuable reference for the general practitioner as well as many of the specialists who are confronted with proctologic problems.

The book's main merits are its concise, practical approach to most proctologic problems whether one agrees or not on the ability to do it on an ambulatory basis.

R. L. M.

THE SCALP IN HEALTH AND DISEASE, by Howard T. Behrman, M.D., Assistant Clinical Professor of Dermatology, New York University Post-Graduate Medical School; Adjunct Dermatologist, Mount Sinai Hospital; Attending Dermatologist, Hillside Psychiatric Institute. St. Louis, The C. V. Mosby Co, 1952. Price $12.50.

Dermatologists and other physicians who treat diseases of the hair and scalp will find this book useful and valuable. It is a thorough condensation, presented in a simple fashion, covering everything from the anatomy and physiology of the hair to discussions of the recent findings regarding endocrine influences. The plentiful illustrations, gathered from many sources, are excellent. The compilation of the most recent advances and therapeutic measures in a single volume should serve to lessen the large amount of mistreatment of scalp disorders, as well as educate physicians regarding the care of the normal scalp, and thus expose the nonmedical hair growing clinics so prevalent in some of our larger cities.

Since the etiology of so many scalp disorders is unknown, there naturally are many statements in this book which will not be universally accepted. There is no dogmatism concerning controversial issues and source references are extensive. No area of the integument frustrates the dermatologist more than diseases of the scalp and hair. This is evidenced by the frequency with which these conditions are attributed to psychogenic causes when no other cause is readily discernable. The frequency with which scalp and hair disorders mirror systemic diseases has long been overlooked.

The language in this text is clear and easily readable. There is a good index. It is highly recommended to all physicians and particularly to dermatologists.

F. X. D.

Advertisement

From where I sit
by Joe Marsh

Wrong "Train" of Thought

Most of us knew the streamliner stopped about four miles from town Thursday—but we didn't know *why*...

Seems the train was hurrying right along, then came the screeching of brakes—some fellow had pulled the Emergency Stop cord.

When the conductor asked him why he did it, he quickly replied, "The train was going much too fast—I wanted to get you to slow down."

From where I sit, that streamliner has been going at that speed for the past seven years with a perfect safety record and the passengers have always been pleased.

Now—along comes a fellow who wants the train to go at his speed. Some people are like that. Some would tell a neighbor how to practice his profession . . . others would begrudge a person's right to a glass of beer—even though they wouldn't dream of flashing a "Stop" sign on preferences for, say, milk, coffee or tea. Respecting the rights of others is the only way we can all keep "on the right track."

Joe Marsh

Copyright, 1953, United States Brewers Foundation

North Shore Health Resort

on the shores of Lake Michigan

WINNETKA, ILLINOIS

NERVOUS and MENTAL DISORDERS
ALCOHOLISM and DRUG ADDICTION

Modern Methods of Treatment

MODERATE RATES

Established 1901
Licensed by State of Illinois

Fully Approved by the
American College of Surgeons

SAMUEL LIEBMAN, M.S., M.D.
Medical Director

225 Sheridan Road WInnetka 6-0211

ACCIDENT, HOSPITAL AND SICKNESS INSURANCE

For Physicians, Surgeons, Dentists Exclusively

$5,000 accidental death Quarterly $8.00 $25 weekly indemnity, accident and sickness	$15,000 accidental death Quarterly $24.00 $75 weekly indemnity, accident and sickness
$10,000 accidental death Quarterly $16.00 $50 weekly indemnity, accident and sickness	$20,000 accidental death Quarterly $32.00 $100 weekly indemnity, accident and sickness

Cost Has Never Exceeded Amounts Shown

ALSO HOSPITAL INSURANCE

	Single	Double	Triple	Quadruple
60 days in Hospital	5.00 per day	10.00 per day	15.00 per day	20.00 per day
30 days of Nurse at Home	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
X-Ray in Hospital	10.00	20.00	30.00	40.00
Medicines in Hospital	10.00	20.00	30.00	40.00
Ambulance to or from Hospital	10.00	20.00	30.00	40.00
COSTS (Quarterly)				
Adult	2.50	5.00	7.50	10.00
Child to age 19	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

$4,000,000.00
INVESTED ASSETS

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

51 years under the same management

$19,500,000.00
PAID FOR CLAIMS

400 First National Bank Building Omaha 2, Nebraska

$200,000.00 deposited with State of Nebraska for protection of our members

RADIUM & RADIUM D+E

(including Radium Applicators)

For All Medical Purposes

Est. 1919

Quincy X-Ray & Radium Laboratories

(Owned and Directed by a Physician-Radiologist)

HAROLD SWANBERG, B.S., M.D., Director

W. C. U. Bldg., Quincy, Illinois

SECLUSION MATERNITY

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.

Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

CLASSIFIED ADS

"BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290."

WANTED—Locum Tenens for 2 years beginning July 15 or August 1, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

GENERAL PRACTICE-COMPLETELY EQUIPPED CLINIC. Partner leaving for Army. Prefer draft exempt G.P. under 35, qualified for general surgery. Volume and remuneration practically unlimited. Excellent hospital facilities. Missouri. Terms open. Full details in first letter. Box 185, Journal of Missouri State Medical Association, 634 N. Grand Ave., St. Louis 3, Mo.

FOR SALE—Ear, Nose and Throat practice established in 1937 and has been continuous till now. This is a city of at least 75,000 population. Due to illness I am quitting practice. Will sell equipment and give possession in a few days. Address inquiries to George A. Griot, M.D., 1640 East Sunshine Drive, Springfield, Mo.

SITUATION WANTED: General Practitioner; age 29; Family; Category IV; completing rotating internship June, 1953; Desire association with G.P. or group. Write Box 186, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

OFFICE SPACE FOR RENT—10424 Manchester Road, Kirkwood, Mo. Established location, doctor retiring, (general practitioner). Room for two. Call Wood Drugs, TErryhill 3-2566.

INDEX TO ADVERTISERS

Abbott Laboratories 244, 276-277
Ayerst, McKenna & Harrison, Ltd. 319

Baker Laboratories 272
Bilhuber-Knoll Corp. 245
Blue Cross-Blue Shield 289

Camel Cigarettes 278
Ciba Pharmaceutical Products 253
City View Sanitarium 316
Cook County Graduate School 318

Duncan Laboratories 249

Paul B. Elder Co. 294

Fairmount Hospital 317

Hamilton-Schmidt Surgical Co. 293

Katz Drug Co. 315
Keeley Institute 290
Knox Gelatine Company 290

Lederle Laboratories ..... Insert
Eli Lilly & Company 258

Mead Johnson & Company 320
Medical Protective Company 307
Merck & Company 247
Milwaukee Sanitarium 293

Neurological Hospital Association 266
Norbury Sanitarium 317
North Shore Health Resort 314

O'Connell Bros. Inc. 317

Parke, Davis & Company 242-243
Chas. Pfizer & Co. 255
Physicians Casualty Association 314
Mary E. Pogue School 316
Producers Creamery Company 275
Purepac Corp. 307

Quincy X-Ray and Radium Labs. 317

Ralph Sanitarium 305
Research Clinic 316

Sanborn Company 307
Schering Corp. 251
Schieffelin & Co. 307
G. D. Searle & Co. 265
E. R. Squibb & Sons 282

U. S. Savings Bond 303
U. S. Brewers Foundation, Inc. 313
Upjohn Company 281

West Texas Maternity Hospital 309
Winthrop-Stearns, Inc. 257
Dorothy Worrell 318

Zemmer Company 309

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Cook County Graduate School of Medicine

Postgraduate Courses—1953

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting April 13, April 27, May 11
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting June 1
Surgical Anatomy & Clinical Surgery, Two Weeks, starting June 15, August 17
Gallbladder Surgery, Ten Hours, starting April 20
Surgery of Colon & Rectum, One Week, starting April 13
General Surgery One Week, starting May 4
General Surgery, Two Weeks, starting April 20
Thoracic Surgery, One Week, starting June 8
Breast & Thyroid Surgery, One Week, starting June 22
Esophageal Surgery, One Week, starting June 22
Fractures & Traumatic Surgery, Two Weeks, starting June 25

GYNECOLOGY—Intensive Course, Two Weeks, starting April 20
Vaginal Approach to Pelvic Surgery, One Week, starting May 4

OBSTETRICS—Intensive Course, Two Weeks, starting June 8

PEDIATRICS—Congenital Heart Disease, Two Weeks, starting May 18
Cerebral Palsy, Two Weeks, starting June 15

MEDICINE—Intensive General Course, Two Weeks, starting May 4
Electrocardiography & Heart Disease, Two Weeks, starting July 13
Allergy, One Month and Six Months, by appointment

CYSTOSCOPY—Ten-Day Practical Course starting every two weeks

DERMATOLOGY—Intensive Course, Two Weeks, starting May 11

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 So. Wood St., Chicago 12, Ill.

Curiosa et Trivia

William B. McCunniff, M.D.

When Dr. Ephraim McDowell did the first laparotomy on a Sunday in December, 1809, the townspeople, having just heard a sermon of "Murder," were congregated outside the house, attempted to force the door, failed, had a rope strung over a limb of a tree in his view, just in case. Despite the success of the operation (the patient lived thirty-two years), local people shunned him, practically reduced him to destitution.

Cochampion pole vaulter 1908 Olympics, holder of 180 patents, magician, founder and owner of the company (Erector Sets, American Flyer Trains, Chemistry Sets) which bears his name, and understandably, one duodenal ulcer, is A. C. Gilbert, M.D., Yale, 1909.

Blue Cross enrollment in the United States in 1937 was 608,021, approximately two thirds the population of St. Louis. In 1952 enrollment was over forty million, about one fourth the population of the United States.

Not necessarily an earmark of "modern" civilization: known gout sufferers include John Milton, Kublai Khan, Alexander the Great, Isaac Newton, Samuel Johnson, Martin Luther, Ben Jonson, John Wesley, Thomas Bacon, John Darwin, Alfred Tennyson.

Leopold Godowski, Polish-American pianist composer, when asked for a picture of his famed and talented hands, complied with his fan's request—and mailed an x-ray negative.

Happy odds: *Medical Economics* quotes a survey indicating that 80 per cent of diagnostic laboratory work is negative.

Orthographical headache: there is no "skull" in skulduggery; nor is a numskull necessarily "numb."

Another check-payer: the word is "desiccate," correct with one "s" and two "c's."

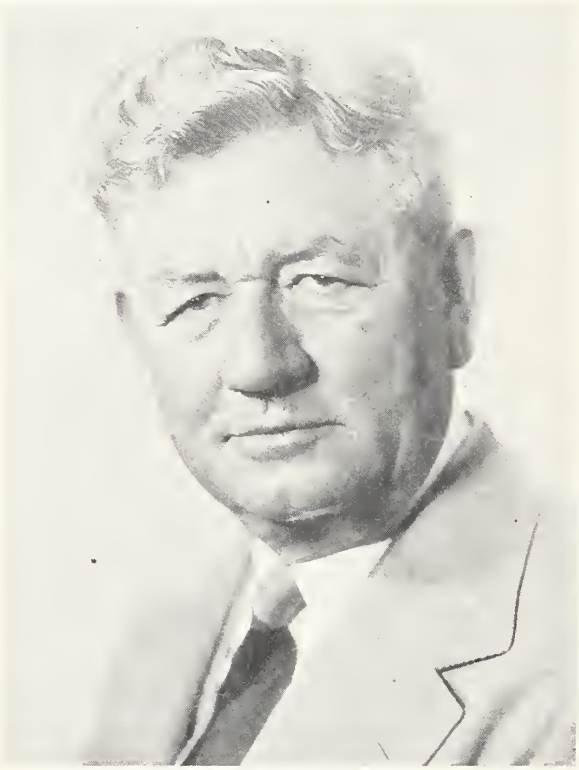
Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

The Physician as a Citizen

LAURENCE F. LEE
President, Chamber of Commerce of the United States

In a talk last fall before the National Association of Life Underwriters, it occurred to me to say that insurance salesmen are especially equipped for the job of selling the American people all over again



Laurence F. Lee, President, Chamber of Commerce of the United States.

on the institution of America and our free enterprise economy.

The suggestion was put like this:

"You are catalytic agents for thinking people—just as you are agents for your insurance companies. Suppose that every time a policy had been purchased in the last fifty years that the buyer had also bought the American system all over again and become convinced of his own individual responsibility to that system.

"That would mean 80 million people firmly convinced to protect and cherish an American system which guarantees opportunity for all. The economic and social possibilities by common action by 80 million policy holders should not be overlooked."

In large degree, this suggestion to the insurance salesmen has application to physicians.

In their essential modesty, physicians may not be aware of the respect they enjoy in the eyes of laymen. Physicians are thought forming people; thought provoking people; they are thought inspiring. Many of them are born students of human nature.

Through practice, others acquire talent in the craft of human relations.

By the very nature of his profession, the physician is a thought leader in whatever community he practices.

It would be absurd to suggest that every physician "sales talk" to every patient about the values of American society; obviously, he cannot and should not attempt to inject a dosage of economic facts with every cc. of Vitamin B. He could not be asked to pound lessons in free enterprise into the patient with his stethoscope.

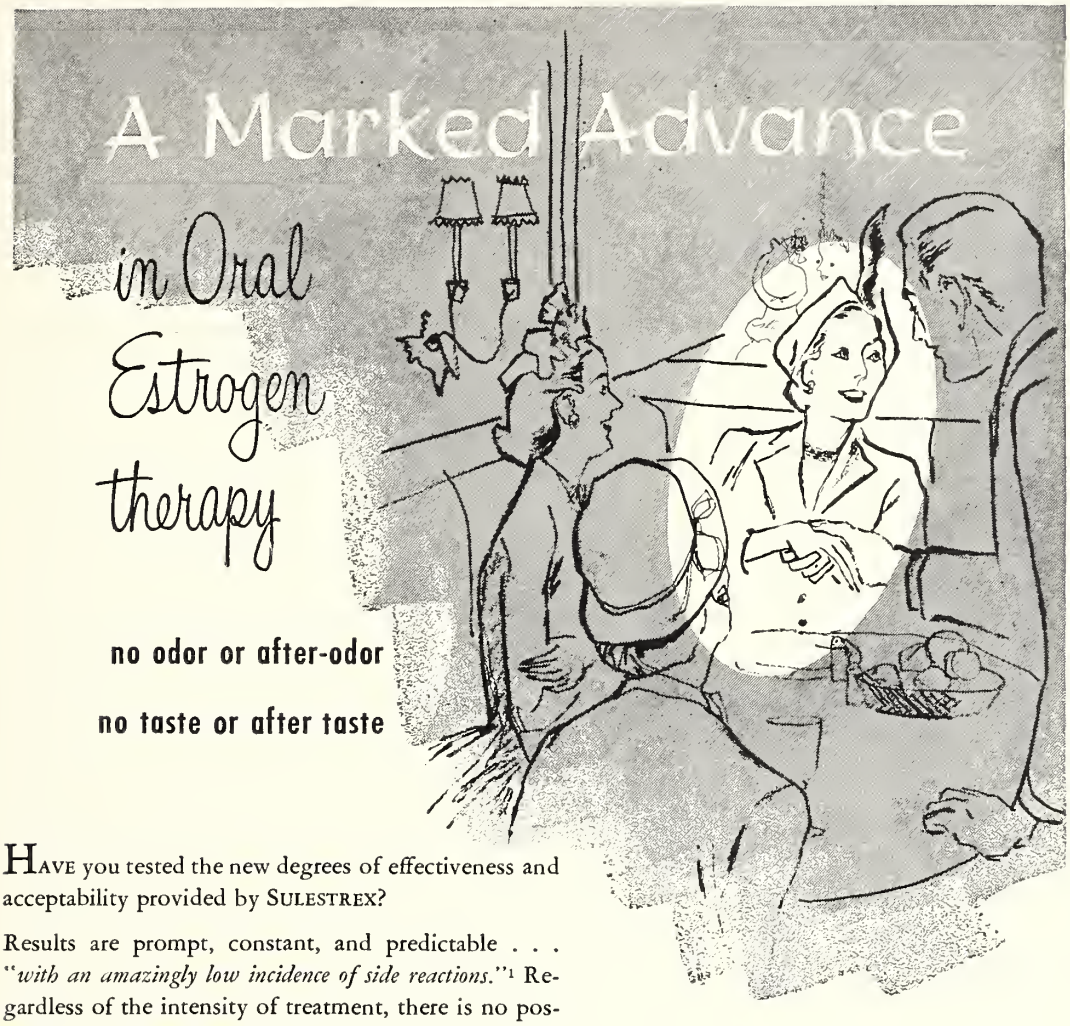
But physicians do indulge in a variety of "small talk" with their patients in the natural routine of things, probably for the purpose of putting the patient at his ease. It is not unreasonable to suggest that this sort of conversation might turn on American values as easily as it often turns on baseball or the local highway situation.

Few of us have more to gain from perpetuation and advancement of the American competitive economy than the physician. Witness the physician under socialism in Britain.

The American people rebuked the federalizers and the believers in centralized authority at the election last November, but it did not put those advocates of a controlled economy out of business. They are still with us, still ambitious for federalized schools, federalized housing—and federalized medicine.

The resistance power against these doctrinaires of socialism for America must be firmly grounded at the grass roots. In the Chamber of Commerce movement, we know that American vigor wells up from the communities—never down from the national capital.

The physician is a first citizen wherever he practices. He owes it to himself, to his profession and to his country to be first among those who are vigilant in defense of our tried and tested society of abundance through opportunity.



HAVE you tested the new degrees of effectiveness and acceptability provided by SULESTREX?

Results are prompt, constant, and predictable . . . "*with an amazingly low incidence of side reactions.*"[1] Regardless of the intensity of treatment, there is no possibility of esthetic "embarrassment."

Measure these advantages when prescribing for your next menopausal patient. SULESTREX (piperazine estrone sulfate, Abbott) provides the natural estrogen, estrone, in pure crystalline form. It is not a mixture of estrogenic agents of variable potencies. SULESTREX is stable, water-soluble, odorless and tasteless.

You may choose from three prescribing forms: Tablets,* Sub-U-Tabs,** and Elixir.* Try it soon, with this confidence: you can't prescribe a more effective oral estrogen.

Abbott

Sulestrex®
Piperazine

* AMA Council Accepted
** T.M. for Sublingual Tablets, Abbott
1. Reich, W. J. et al. (1952), A Recent Advance in Estrogenic Therapy. II. Amer. J. Obst. & Gynec., 64:174, July.

1-1643

With Our G. P.'s

William J. Shaw, M.D.

The general practitioner, if born since 1902, now has something more in common with Board Diplomates and other specialists. Uncle Sam is breathing the same hot breath down the neck of specialist and general practitioner alike. Nothing in recent years has spilled more printer's ink, initiated more meetings nor caused a greater strain on the nation's vocabulary than that piece of legislative discrimination, PL 779, the doctor draft law.

William J. Shaw, M.D.

The emergency creating the unusual demand for doctors unfortunately outlasted the original doctor draft law. The military services are entitled to and are going to get adequate medical care for the combat services, thus the jockeying for position started a year before the doctor draft law expired. Having practically exhausted priorities one and two, they insisted a new law was imperative. The AMA, although not objecting, wanted certain changes to render a new law acceptable. The physical examinations of priority three confirmed the opinions voiced by many doctors and selective service boards: the age limit was too high.

Lowering of physical standards dropped the disqualifying rate for priority three from 50 to 23 per cent. The question of essentiality looms large. Although it seems that the only custodian of a rural community's health could be less easily spared than an urban physician, other factors are apparent. Nineteen per cent of medical school faculties are in priority three; 62 per cent of medical faculties are under 40; 80 per cent of research doctors are less than 50 years old; 31 per cent of priority three doctors are under 40 and many were declared 4F in the last war. Who, then, shall say who is essential?

Colonel James B. Mason, a reserve officer on duty in the Surgeon General's Office in Washington, will discuss the "doctor situation" at the afternoon meeting of the Missouri Reserve Officers Association in Jefferson City, May 23.

Every doctor in the State is invited by the R.O.A. to attend this meeting and hear an expert explain the ramifications of this law, so vital to the future of specialists and general practitioners of the State.

Division of Health

James R. Amos, M.D., *Director*

Fraudulent Devices Seized

The Division of Health, through the Bureau of Food and Drugs, recently applied for and received a court order for a permanent injunction against J. C. Gage, of Eldorado Springs, Missouri, prohibiting him from manufacturing and selling a device which he called the Radiant Ozone Generator.

Mr. Gage's claims for these Ozone Generators were that said device, "has been successful in treating all diseases known to suffering humanity." Also in his directions for using the machine he advised, "do not use medicine in any form when using the Radiant Ozone Generator. This means the entire time." . . . "if one's liver is stagnated and the general treatment makes one sick at the stomach, take a level teaspoonful of table salt in a pint of medium warm water, and that will force the bile out of the stomach." A typical example for the treatment which Mr. Gage advises for Heart Trouble, Piles, Prostate Gland, Colitis, and Constipation, is as follows:

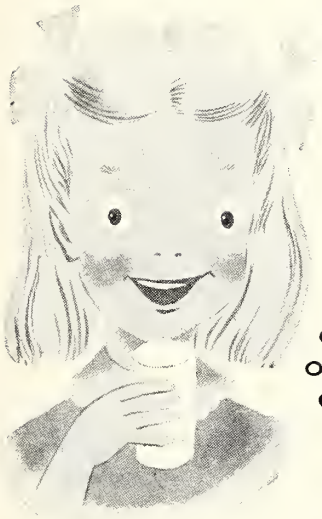
"*Heart Trouble*—Cleanse the body, go to bed nude, place the tubes near the heart until the pain is gone, change to the back of the shoulders for thirty minutes, change to the small of the back for thirty minutes, change to the feet for the rest of the night."

"*Piles, Prostate Gland, Colitis, Constipation*—Make an air-tight box, if possible, 18 inches high, 20 inches wide by 20 inches long, cut a toilet seat out of the top, place the generator with tubes up, about 4 inches from the top of the box on a support of some kind. Sit on the box over the tubes two hours each day as near the same time as possible until relieved."

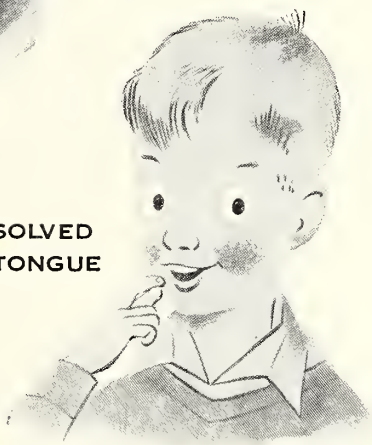
Seven of these machines were ordered to be seized by the Cedar County Circuit Court as a result of the excellent cooperation of the Cedar County Prosecuting Attorney. Upon examination by Missouri Food and Drug officials it was determined that the machines consisted of a hardwood box approximately 8 inches high, 8 inches wide and approximately 18 inches long. Neon type Glass S tubes were mounted with an off and on switch as visible parts of the machine. Examination of the interior of the machine showed that it consisted of a 110 volt input transformer, output 7500 volts. Apparently this voltage through the tubes which contain Mercury, created enough potential to produce a small amount of Ozone. These machines sold for $150 each.

Children take it without the least bit of fuss...

SWALLOWED WHOLE



CHEWED—OR IN FOOD OR LIQUID



DISSOLVED ON TONGUE

- The Best Tasting Aspirin you Can Prescribe.
- The Flavor Remains Stable Down to the Last Tablet in the Bottle.
- 24 Tablet Bottle... 2½ gr. each 15¢

2½ gr. ⇨ 1¼ gr.

Grooved Tablets—Easily Halved

NEW FLAVORED

CHILDREN'S SIZE

BAYER ASPIRIN

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N.Y.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

Last week you asked my why I practice medicine in a rural community and especially why I do it in Smithton. Now that's a good question. Nobody ever asked me that before. Come to think of it, can't rightly say that I ever heard about anybody asking any of us out here to tell why we are here.

With all the lip service being paid as to how to get young Docs out into the country it appears they might ask us sometime. Why we come and why we stay. The Big Union's solution to the problem so far reminds me of the ancient philosophers who solved the problems of the universe from a rockin' chair (Did they have rockin' chairs then?). They seem to think it can be solved in a committee room by a bunch of Docs whose closest contact with rural medicine was passing through on a train on the way to the meeting.

Grandpap always said most anybody thinks he can run a train, drive a nail or fly a kite better than the man whose job is doing it. He also used to tell me that kids should be seen and not heard.

My qualifications for being heard are thirty-six years of hard work, ten years out of medical school of which half was spent in the Navy and the other half here in Smithton; both in two hitches. I have been doing what I'm talking about. Whether they meet specifications or not, here goes:

Practicing medicine in Smithton is a state of mind. It's a feeling that gets under my skin. No matter where I go it's that little man who keeps popping up, making me wonder how my people are doing. It's a disease and the only treatment is here in Smithton.

This area is my home. I come almost being borned up in Schroughneck and was raised around here. (We still raise our kids around these parts.) I know all the people and they know me. I understand them because I am one of them. The older ones knew me as a kid when we lived on the farm. After my Mom died in '19 we moved to Florence and Dad run a general store. People remember me working in it. Mrs. B. still reminds me 'bout the time I sat down in her basket of eggs. She really got her dander up then but she comes to my office now. Many I grew up and went to school with. (Prepositions are words that most folks 'round here end sentences with. I can do it with the best of them.) Lots of my patients I remember when they were borned.

Coming back home has advantages that tip the stillyard far to that side. Many things that happened when I was growing up and were then not fully understood are comprehended now and help me in my every day work. I already know things about my patients they would never confide to anyone else.

People don't call me "Dr. Siegel." When they do they are right smart mad at me or else are strangers. When I walk in the blacksmith shop it's a nice warm feeling to have an eighty-year old say "Howdy, Pete." When I drive by the school it gives me a charge to see the kids stop playing, wave and yell, "Hi, Dr. Pete."

I can live on a farm, have a few Angus and a horse, get in my Levis and haul manure when I have time. I can make house calls in them because most people first knew me in overalls. I am not expected to use the front door but to walk in through the kitchen without knocking. The air is cool and clean. We have neighbors who act like neighbors ought to.

People come in the office and ask me for advice . . . like how to vote, where can I buy a bull, where should we send the kid to college, or what should we do with Grandma?

I get butterflies in my stummick when I see Carolyn G. walk down the street with her three little girls. You see, I delivered 'em. Five years ago Carolyn was in high school with my kid sis and used to come to the house often. She is 21, helps Nolen with the farm work like my Mom used to help my Dad.

Five years ago I first saw Mrs. H. She had been in bed six months, paralyzed with a stroke. Since then we have helped her through a strangulated ventral hernia and radiation and removal of a cervical carcinoma. Words don't come to describe the feeling I get when she WALKS into the office. I neither ask nor claim any credit. The Good Lord did it because she had the faith of a mustard seed. All I did was deliver a few pills for Him. (I am a self-respecting doctor and I don't mind a bit being called a pill-peddler.)

Then there is Linda R. Cutest, chubby little red head of 6 you'll ever see. I could never forget her five years ago . . . eleven months and eleven pounds, couldn't tell where she left off and the sheet commenced . . . whooping cough!

Now know why I practice medicine in Smithton, Uncle Teddie?

Your rural (and damn proud of it) nephew,
Pete

P.S. Don't get the idea that a good feeling is the only reward. Last March my accountant finished the income tax figurin' and from the looks of them I am a specialist in a city of 100,000 . . . that's a good feeling too!

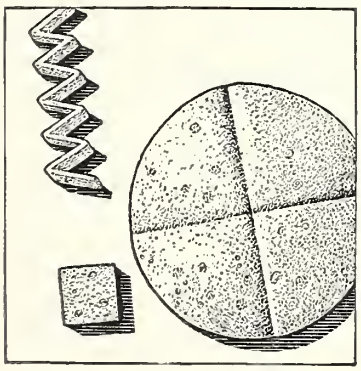
Upjohn

absorbable
hemostat:

Available in a large variety of sizes and forms, including:

Surgical sponges
Compressed surgical sponges
Dental packs
Gynecologic packs
Nasal packs
Prostatectomy cones
Tumor diagnosis kit

The Upjohn Company, Kalamazoo, Michigan



Gelfoam

Trademark Reg. U.S. Pat. Off. BRAND OF ABSORBABLE GELATIN SPONGE

What Is Your Hobby, Doctor?

"The Sport of Queens"

For more than fifteen hundred years, one of the prominent pastimes of nobility (particularly the distaff side), has been the breeding and racing of greyhounds. Today, it not only is a compelling hobby, it also has attained the stature of big business. In the case of B. A. Poorman, M.D., "following the hounds" is a love of a country boy carried through more than half a century.

"Bert," as a boy in Kansas, first raced against live jackrabbits in 1892. He was the only outsider

who "coursed" against officers at nearby Ft. Riley. Each town has its champion; young Poorman represented Junction City. He met such notables as Cols. Allen and Street (later prominent generals in World War II), and still corresponds with several of these acquaintances.

His first thrill was in 1895, when his favorite, "Slow Go R," attracted some New Yorkers who had traveled clear out to Herrington, Kansas, for the event. From then on, he has won many notable events, including the Reitz Cup in Panama City, with his "Princess Model"; the Erie, Pennsylvania, Stake, with "Victoria Meadows"; the Palo Alto Stake, again with "Victoria Meadows." He really hit the jack-pot when he won the National Waterloo Cup at Dodge City, with "Dash O'Light," an Irish imported hound. In the greyhound circuit this corresponds to the American Derby among horse followers.

For many years, Dr. Poorman raised and trained from fifty to seventy-five dogs each year. Among his stud dogs, "Just Roll" was featured in a New York Times article as one of the greatest litter ever in America.

The National Coursing Association (Dr. Poorman served as Vice President for many years), has its headquarters in Abilene, Kansas. Each April and October finds some 800 in competition there, from virtually all the states and Canada. Each event lasts eight days. This parent organization certifies each hound, using Bertillon, toenail conformation and markings, "to keep the sport clean" on a strictly amateur basis, in distinction to the National Racing Association which is for the professionals. All this data is compiled in an annual book, "The Greyhound Stud Book," with many pedigree lineages going back more than a hundred years.

"There is no money to be made on a strictly amateur basis," insists Dr. Poorman, "but a fellow sure has lots of excitement, thrills and pride as compensation—and, once in a lifetime "overwhelming surprises," he concludes, as demonstrated by "Ambassateur." This hound was rejected by others, despite recognizable talent, because of the bad habit of turning his head. But Dr. Poorman trained him, with more than ordinary care, and was rewarded when he won the hurdles at Atlantic City, in 1933. Such, "Bert" insists, is the sort of thing which has kept his fever for the dogs undiminished, despite many disappointments, for more than six decades—this, "The Sport of Queens."

(Let us know of other colleagues who have unusual hobbies. V. T. W.)

Hartford Doctors Curb Excessive Fees

Hartford (Conn.) County's 867 member medical society recently adopted a new by-law which is aimed at curbing doctors who try to saddle patients with exorbitant charges. The *Hartford Times*, reporting the society's action, said: "The move is another step by the public relations conscious organization to strengthen the position of the profession with the public by imposing shackles on any who might tear down public confidence through gross overcharging. It is believed to be the first of the state's eight county medical societies to give its officials such broad powers."

The newspaper said that the county society amended its by-laws to give the committee on medical ethics and deportment a strong weapon to "police" its ranks in matters of overcharging.

One provision of the by-law is that the committee can call in three impartial doctors who are specialists in the field involved and get their advice on the reasonableness of fees for service given.—George F. Lull, M.D., *Secretary's Letter.*

"...particularly beneficial in the treatment of hay fever."[1]

Because CHLOR-*TRIMETON*® maleate, chlorprophenpyridamine maleate, has the greatest potency milligram for milligram of any available antihistamine, and because "Chlor-Trimeton has a relatively low incidence of side reactions,"[2] it is a drug of choice for hay fever patients.

CHLOR-*TRIMETON*

maleate

1. Silbert, N. E.: New England J. Med. *242*:931, 1950.
2. Eisenstadt, W. S.: Journal Lancet *70*:26, 1950.

Schering CORPORATION
BLOOMFIELD, NEW JERSEY

CHLOR-*TRIMETON*

SCHERING

Our Auxiliary

Take Time to Consider the Plight of "Today's Health"

Mrs. C. Alex (Helen) McBurney, *President*

The man who said "a woman's place is in the home" might have revised his famous phrase had he known of the activities of the Woman's Auxiliary to the Missouri State Medical Association. The public relations program is geared at the state and local levels, benefiting the people of Missouri.

In 1931, the A.M.A. passed a resolution asking the auxiliary to help stimulate the sale of *Hygeia,* now *Today's Health.* There is an operating deficit for the magazine this year, necessitating an appeal by W. W. Bauer, M.D., Editor, for our collective support, the goal being "a subscription for *Today's Health* from every physician. Such an increase would greatly offset the financial burden to the Association of editing and publishing the magazine for the health education of the American Public."

The A.M.A. feels that *Today's Health* will have to carry more of the financial burden itself or they will have to discontinue this health magazine for the lay public.

Today's Health is good public relations in a time when so much is written in current publications to excite the public. *Today's Health* is a useful tool for the busy doctor, since it aims to educate the general public in modern methods. It exposes quacks, faddists and cultists. Each article emphasizes the value of relying upon trained qualified medical men—you doctors.

If *Today's Health* can no longer exist, there is a possibility that the government may publish a magazine to educate the public to think as it desires.

Please take time to consider the plight of *Today's Health* and order now. Mrs. Harry M. Gilkey, 4941 Westwood, Kansas City, is Chairman.

Progress Notes of Prepayment Plans

(Kansas City Blue Cross-Blue Shield)

"Blue Print for Health" has become standard waiting-room literature. Containing articles by prominent physicians, it provides nonmedical readers with interesting, authoritative information. Each Participating Physician has a free subscription to this quarterly publication through Blue Cross-Blue Shield.

Kansas City area's Blue Shield, along with the companion Blue Cross Plan, shows good progress for 1952. The sizable rate increase which went into effect in 1952 caused some cancellation, but this was more than offset by an intensified enrollment program. The Plans' annual report, soon to be issued, will reflect steady membership growth and a sound financial position.

Physicians in Kansas City and northwest Missouri received more than three million dollars from Blue Shield in 1952. The actual amount was $3,008,904, as compared with $2,728,525 in 1951. Operating expenses were held to a record low of 8 per cent, and 6 per cent of dues income was set aside for future maternity care, unreported cases and other contingencies. Approximately 86 per cent of total Plan income was paid to physicians in each of the years 1951 and 1952.

A new check is being used to send doctors' Blue Shield payments. It is the familiar punch-card type of check which greatly facilitates processing, saving time and money in Plan operation.

Doctors in the St. Joseph area may now call Blue Cross-Blue Shield as they would their next door neighbors, using a special direct line service. By dialing 3-2521 in St. Joseph, a caller will be automatically connected with the Kansas City Plan office. Doctors and hospitals have found this service helpful.

Bridge That Gap

We general practitioners must always be dissatisfied with the gaps in our knowledge and distressed over the fact that we have so little time to do more reading or take a larger number of postgraduate courses. Most assuredly, no one of us can know all that he needs to know. We just cannot cover all the fine points of the practice of medicine.

But, while we can never reach the point of perfection in wisdom, we must take advantage of every opportunity at our disposal to further our knowledge.

One of the most powerful methods for gaining specific information about certain phases of medicine is the scientific assembly.—News and Views, *St. Louis Academy General Practice.*

Large Amounts of Protein in Small Volume

Adequate protein nutrition has been found essential to:

- all types of wound healing, including the healing of fractures,
- adequate functioning of intestinal anastomoses,
- repair of regenerating parenchymal organs such as the liver,
- resistance to hepatotoxins and other injurious agents,
- maintenance of normal fluid distribution.

ESSENAMINE®

Compound

SMOOTH, MICRO-ATOMIZED PROTEIN CONCENTRATE FOR ORAL USE

Supplies 3 times as much protein as meat --weight for weight.

Supplied in three forms:

Essenamine Powder Unflavored,
7½ and 14 oz. glass jars.

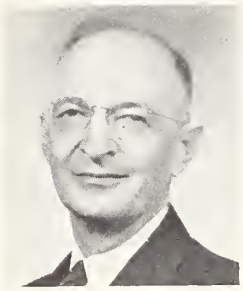
Essenamine Compound Powder
(with carbohydrate 25%), Vanillin Flavored,
1 lb. glass jars.

Essenamine Compound Granules
(with carbohydrate 30%), Vanillin Flavored,
7½ oz. and 1 lb. glass jars.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Essenamine, trademark reg. U. S. & Canada

President's Message



Blue Cross and Blue Shield organizations (St. Louis plans) have made available recently membership on an individual person or on a family basis. There has been a need for these services, particularly in rural areas in which groups are not easily formed. Many in these areas have been seeking and asking for such coverage. It is hoped that this trial run of individual enrollment will prove sufficiently satisfactory so as to enable the plans to be offered regularly in the future.

More than 25,000,000 people are now enrolled in Blue Shield plans, constituting 16 per cent of the entire population of this country. A total of $208,000,000 was paid in benefits during 1952.

Eldon de Bohrer

Capsule Clinics

Irving A. Wien, M.D.

- Ninety per cent of acquired strictures of the urethra have been of gonorrheal origin while the remaining 10 per cent have been of traumatic origin. The improved treatment of gonorrheal infection is certain to change this ratio. Byrne, J. E.: J. Missouri M. A. **50**:23, 1953.
- Papanicolaou has warned that the vaginal smear in the diagnosis of cervical and endometrial carcinomas was only a tool to arouse suspicion; biopsy is still the only final means of arriving at the diagnosis. Cancer Bulletin **4** (November-December) 1952.
- In the treatment of monilial vaginitis clinical and laboratory "cures" were obtained in 85 per cent of the cases with caprylic acid derivatives. Reich, W. J., et al: Am. J. Obst. & Gynec. **65** (January) 1953.
- Thirty-three of thirty-five patients obtained relief from postspinal headache when given buccal tablets of desoxycorticosterone acetate. Carrington, E. R., et al: Am. J. Obst. & Gynec. **65** (January) 1953.
- Khellin (visamin) is of value in angina pectoris but possesses side effects such as nausea and vomiting which may prevent its widespread use. Conn, J. J., et al: Ann. Int. Med. **38** (January) 1953.
- Regardless of care in examination, including gastroscopy and surgical exploration, there are some 15 to 17 per cent of the cases of hematemesis in which no pathologic condition can be found. Moreton, R. D.: Southern M. J. **46** (February) 1953.
- The prevalence of poliomyelitis in adults may be due to the "new" strains of the poliomyelitis virus—strains against which adults and older children have no immunity. Gen. Prac. **7** (January) 1953.
- Notching of the lower margins of ribs is the most important roentgenologic sign of coarctation of the aorta. Gen. Prac. **7** (January) 1953.
- The principles of the treatment of acute pancreatitis are: minimum stimulation of the pancreas, combat spasm of the sphincter of Oddi, relieve pain, treat shock, correct fluid and electrolyte balance, and treat the ileus. Dodson, H. C., et al: Dallas M. J. **39** (January) 1953.
- The three quarter gastric resection has proved very satisfactory in the surgical management of complicated peptic ulcers in 893 cases. Rauch, R. F.: Internat. Surg. Digest **55** (January) 1953.
- Esophagoscopy is the most exact method of obtaining correct information about the presence or absence of a growth in the esophagus. Franklin, R. H., and Shipman, J. J.: Eye, Ear, Nose & Throat Month. **32** (February) 1953.
- Blood in the stool is a sign which must not be underestimated. This is "often the first and only evidence of an early carcinoma" or premalignant polyp. Campbell, F.: Kansas City M. J. **29** (January-February) 1953.
- Except in malnourished or sickly infants, a repair of an inguinal hernia can be done safely during the second or third months of life when it may first be discovered. Cogswell, H. D., and Czerny, E. W.: Am. Surg. **9** (January) 1953.
- The pelviscope permits detection of tubal pregnancy, endometriosis, ovarian or pelvic cancer, and differentiates pelvic organic disease from psychoneurosis. Doyle, J. B.: J.A.M.A. **151** (February) 1953.
- Steel cloth implant repair of hernia offers a secure closure without wound tension and a better opportunity for permanent cure. Preston, D. J.: J.A.M.A. **151** (February) 1953.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 May, 1953 Number 5

GIANT CALCULUS OF THE BLADDER

REPORT OF CASE AND REVIEW OF LITERATURE

E. H. BURFORD, M.D.
ST. LOUIS
C. E. BURFORD, M. D.
ST. LOUIS
AND
J. E. GLENN, M.D.
ST. LOUIS

GIANT BLADDER CALCULI are always a medical curiosity. How a person can carry such large calculi without more symptoms has forever been an enigma. To say that this does not happen in modern medicine, that such are only relics of the stone age, is statistically incorrect as almost half of the giant calculi reported have been discovered since 1900. The purpose of this paper is to report another giant stone successfully removed and to review the literature.

CASE REPORT

A 71 year old white male was admitted to the Missouri Baptist Hospital on April 4, 1952, with chief complaint of rectal hemorrhages for the last forty-eight hours. There were six of these, the largest the patient estimated at a pint. Incidental complaint was "kidney trouble" since his youth, pus in the urine for as long as he could remember, frequency and burning on urination since childhood. His family history was essentially negative.

Physical examination revealed a well preserved man who appeared considerably younger than his stated age. Conjunctivae and nail beds were slightly pale. The temperature, pulse and respiration were normal. The lungs were clear but the heart exhibited a rare extrasystole and there was a murmur detected over the mitral area. Blood pressure was 114/60. The abdomen was not protruding but a firm mass could be felt suprapubically. Rectal palpation revealed a large stony hard mass and an extremely small prostate which was soft.

The urine was cloudy, amber, Ph 7.5, specific gravity 1,006, albumin one plus, no sugar, many white blood cells, few red blood cells and many bacilli. The blood was hemoglobin 68 per cent; red blood count 3,300,000; white blood count 9,850 with 83 segmented leukocytes. Cardiolipin was negative, nonprotein nitrogen 32 mg. per cent, clotting time 5 minutes, 30 seconds.

The day after admission a proctoscopic examination by Dr. Virgil Fish revealed a pedunculated polyp in the region of the rectosigmoid measuring approximately 1 cm. in diameter.

A gastrointestinal series and barium enema were ordered and reported April 7, 1952, within normal limits and in addition a large laminated bladder stone measuring 4 inches in diameter (fig. 1). Flat kidney, ureter and bladder x-ray failed to reveal any other urinary calculi. On April 10, 1952, following a blood transfusion, the rectal polyp was removed by Dr. Fish with snare and point of removal fulgurated.

It took a few days to convince the patient that he had a giant calculus of the bladder and that it should be removed. On April 15, 1952, suprapubic cystoli-

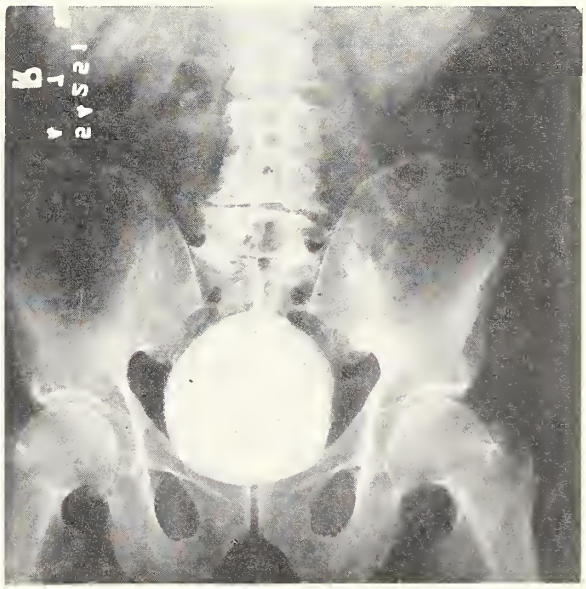


Figure 1

thotomy was performed under sodium pentothal anesthesia and the stone was removed intact by means of the curved blades of a pair of Dever retractors. A 5 inch incision of the bladder was required. The bladder was free of tumors and its mucosa had the appearance of gray leather. The prostate was scarcely palpable it was so small. The vesical neck was divulsed

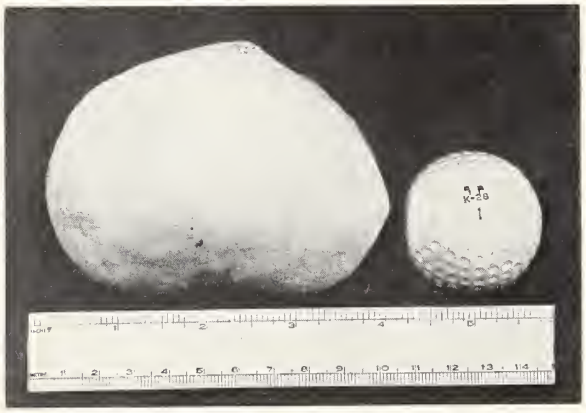


Figure 2

with a No. 30 F. sound. The stone was the size of a pint cup exhibiting a glistening surface of crystals such as calcium oxalate (fig. 2). Its weight was 617 grams or 1 lb. 5 3/5 ounces. Operating time was forty minutes.

The patient had a normal postoperative course, being discharged on May 14, 1952, voiding normally, with fairly clear urine and no residual. He was seen at the office August 2, 1952, and December 20, 1952, with clear urine and one ounce residual. He is living and well to date; rode a tractor on his farm the same summer.

DISCUSSION

This review of the literature embraces twenty-six giant calculi including the one reported, although there are other large stones of lesser weight not included.

The earliest giant calculus on record and the second largest was removed from a 47 year old prelate postmortem in 1690 and the stone is in the Musée Dupuytren in Paris.

Fifteen cases were tabulated prior to 1900 and only two of these patients lived and one for only two and one-half months, most of them dying in from a few hours to a few days. In five instances the calculus was removed postmortem.

Of the eleven giant calculi recorded since 1900, seven patients survived the surgical removal but two died within from three to ten months of a coexisting bladder neoplasm and one died five years later of carcinoma of prostate.

The geographical distribution of these case reports were as follows:

Country	Number Cases
United States	7
France	5
Great Britain	5
India	3
Italy	2
Belgium	1
Germany	1
Egypt	1
Canada	1

All of the cases reported by British surgeons in what was the British Empire, were prior to 1900 with one exception which would give the British a lead of nine cases in interest, but all seven cases by American surgeons were reported since 1900. Five of these survived surgery but one of the five cases died two months later of coexisting bladder

TABLE 1

Data on Twenty-Six Giant Calculi

Author	Country	Year	Age of Patient	Sex	Weight of Stone in Gms.	Outcome
Deschamps	France	1690	47	M	1596	Postmortem
Earle	Britain	1809	53	M	1250	Died in 10 days. Removed postmortem
Uytterhoeven	Belgium	1869	39	M	1151	Died in 8 days
Daland	India	1876	25	M	859	Died in 12 hours
Langenbuch	Germany	1879		M	720	Postmortem
Despres	France	1881		M	909	Died
DeGuise	France	1881		M	881	Died
Vitellius	Italy	1881		M	625	Died
Cayley	India	1884		M	724	Died in 3 days
Smith, Thomas	Britain	1886	43	M	696	Lived
Humphrey and Holmes	Britain	1886		M	937	Postmortem
Humphrey and Holmes	Britain	1886		M	710	Postmortem
Morrison	Britain	1886		M	639	Died in 13 days
Milton	Egypt	1893	60	M	995	Died in 2½ months
Bamber	India	1893		M	710	Died in 6 months
Post-Abner	U.S.A.	1908		M	664	Died
Smith, E. C.	Canada	1918	55	M	1155	Lived
Randall	U.S.A.	1920	61	M	1818	Died in 36 hours
Mendez	France	1925	53	M	1516	
McCallum and Ewell	U.S.A.	1928	54	M	746	Died carcinoma prostate in 5 years
Serra	Italy	1935	62	F	620	
Lepreau and Jenkins	U.S.A.	1940	34	M	1134	Well 2 years later
Crance	U.S.A.	1940	74	M	795	Lived
Huc	France	1947		M	870	Died in 10 months carcinoma bladder
Powers and Matflerd	U.S.A.	1949	64	M	1410	Died in 3 months carcinoma bladder
Burford, Burford, Glenn	U.S.A.	1952	71	M	617	Well 10 months later

neoplasm and one died five years later of carcinoma of the prostate. Two of the three survivors were operated on in 1940 while the present case was operated on in 1952.

Only a single female patient was recorded and this report came from Italy. The youngest patient was 25 years of age while the oldest was 74. The latter is one of the survivors. The average age was 53 years.

The following table lists the twenty-six largest giant calculi on record in chronologic order:

SUMMARY

A case report is made of the twenty-sixth largest giant calculus on record. The literature on this subject has been reviewed with the following conclusions concerning this case:

1. The twenty-sixth largest giant calculus and the seventh in the United States.
2. The fifth case on record to ultimately survive and the third in the U. S. A.
3. The second oldest patient to survive.
4. The second giant calculus to be reported from the same state.
5. The mystery remains unsolved how a stone can attain such a size without causing more severe symptoms.

BIBLIOGRAPHY

Earle, Sir James: Philosophic Tr. Roy. Soc. London, pt. 1, 1809, p. 303.
Ashurst: International Encyclopedia of Surgery, 1886.
Daland, Judson: J. Urol. **34**:309-312 (October) 1935.
Langenbuch: Verhandl. d. Deutsch. Gesellsch. f. Chir. 26 (April) 1879.
Cayley: Indian M. Gaz. **19**:24, 1884.
Milton, H. M. N.: Lancet **2**:687-688, 1893.
Bamber, G. J.: Red. Rec. **58**:637, 1900.
Watson and Cunningham, 1908.
Smith, E. C.: Surg., Gynec. & Obst. **29**:481-484, 1919.
Randall, A.: J. Urol. **5**:119-125, 1921.
Mendez, A.: J. de Chir. May, 1926.
McCallum and Ewell: J. Missouri M. A. **25**: (February) 1928.
Serra, G.: Arch. ital. di Urol. **12**:548 (May) 1935.
Crance, Albert M.: J. Urol. **45**:327-330 (March) 1941.
Lepreau, Frank J., Jr., and Jenkins, Ralph H.: New England J. Med. **229**:937-938, 1943.
Huc, E.: Semaine d. jop. Paris (supp.) **23**:2901-2902, 1947.
Powers, John H., and Matflerd, R. G.: J. Urol. **67**:184-191 (February) 1952.
Deming, C. L.: Personal Communication.

Differentiation of Diverticulitis and Carcinoma

. . . No reliance can be placed on symptomatology or physical signs in an individual case. . . . This applies also to sigmoidoscopic examination and roentgenologic findings.

. . . Bleeding occurred in 62 per cent of carcinomas . . . 18.8 per cent of diverticulitis cases.

. . . Change in bowel habits occurred in both diseases with regularity. . . . Pain occurred in 58 per cent . . . with diverticulitis, 16 per cent . . . with carcinoma.

. . . the modern therapy of complicated diverticulitis should be . . . early resection.

. . . A more aggressive approach . . . seems warranted . . . diverticulitis coexisting with carcinoma is a coincidence (but) the possibility is ever present.

Our cases have been reviewed and six additional cases of coexisting carcinoma and diverticulitis of the colon have been added.—Gene B. Starkloff, M.D., and Donald Bindbeutal, M.D., *American Surgeon.*

THE MORTALITY OF ACUTE APPENDICITIS TREATED SURGICALLY IN A SMALL GENERAL HOSPITAL: A FIFTEEN YEAR REVIEW

J. H. HILL, M.D.
KANSAS CITY
AND
R. W. BUTCHER, B.S.
KANSAS CITY

IN THE MORE than 13,000 papers written about appendicitis since the classical description of the disease by Reginald Fitz in 1886[5, 6] are many reports of the mortality from large teaching hospitals[1, 2, 3, 4, 6, 7, 9] but relatively few from smaller hospitals.[8, 10] In this review of the mortality in 2,212 cases of acute appendicitis treated surgically and confirmed by pathologic examination in a 145 bed general hospital between 1936 and 1950, a sharp reduction in mortality was found which coincided with the introduction of sulfonamides and antibiotics. This reduction in mortality was not associated with a corresponding decrease in the incidence of perforation and gangrene.

MATERIALS AND METHODS

The mortality of acute appendicitis was determined in the 2,212 patients treated surgically in the Trinity Lutheran Hospital in Kansas City, Missouri, between 1936 and 1950. Only those cases were used in which pathologic examination revealed significant polymorphonuclear leukocyte infiltration of the appendix. Cases treated conservatively were quite rare and were omitted. During this fifteen year period there were 69,489 hospital admissions of which 33,171 were to the surgical services. The cases were analyzed by five year periods, the first of which (1936-1940) represented the presulfonamide era. In the second period (1941-1945) sulfonamides were used and in the third period (1946-1950) both sulfonamides and the antibiotics, penicillin and streptomycin, were used. In the first five year period there were 7,723 surgical cases and 738 cases of acute appendicitis in the 15,225 hospital admissions. During the second five year period there were 23,674 hospital admissions, 10,346 surgical cases and 891 cases of acute appendicitis, while in the third five year period the hospital admissions numbered 30,590, the surgical cases 15,102 and the cases of proven acute appendicitis were 583.*

RESULTS

The mortality in each of the five year periods is shown in table 1, the per cent of deaths being 3.8, 1.0 and 0.5 respectively. In table 2 are shown the incidence of performation and gangrene and

---

From the Department of Pathology of the Trinity Lutheran Hospital, Kansas City, Missouri.

* Dr. Ralph Hale reviewed the cases for the periods 1936-1940 and 1941-1945.

the mortality when these complications were present. Thirty-four of the forty deaths were from peritonitis, two from pulmonary embolism and one each from shock, postoperative intestinal obstruction, bronchopneumonia and cachexia.

TABLE 1

THE MORTALITY OF SURGICALLY TREATED ACUTE APPENDICITIS BETWEEN 1936 AND 1950 ACCORDING TO FIVE YEAR PERIODS

Period	*No. of Cases of Acute Appendicitis*	*No. and Per Cent of Deaths*
1936-40	738	28 (3.8)
1941-45	891	9 (1.0)
1946-50	583	3 (0.5)
Total	2,212	40 (1.8)

TABLE 2

THE INCIDENCE OF PERFORATION OR GANGRENE IN THE CASES OF ACUTE APPENDICITIS, AND THE MORTALITY IN THIS GROUP ACCORDING TO FIVE YEAR PERIODS

Period	*No. and Per Cent of Cases With Perforation or Gangrene*	*No. and Per Cent of Deaths in Group With Perforation or Gangrene*
1936-40	94 (13)	15 (16)
1941-45	79 (9)	8 (10)
1946-50	66 (11)	2 (3)
Total	239 (11)	25 (10)

DISCUSSION

The decrease in mortality of acute appendicitis treated surgically during this fifteen year period corresponds with the results of other similar studies. Since the great majority of deaths were due to peritonitis, the improvement in mortality is due to better management of this complication of the disease. This can be attributed to the introduction of sulfonamides and antibiotics which coincided with the marked decrease in mortality found in the second and third five year periods. Other factors may have improved the morbidity which was not estimated in this study. Prepaid insurance plans which lessen the financial problem have undoubtedly led to earlier operation in some instances. Likewise, improved anesthesia and education of the public in the early symptoms of the disease and of the danger of purgatives may have had some effect on morbidity but seemed not to have an important role in influencing the mortality. Apparently, from the material forming the basis of this study, education of the public and of physicians has not appreciably altered the incidence of perforation and gangrene. The improvement in mortality can be considered as another example of the change in the pattern of infectious disease brought about by the use of chemotherapy and antibiotics.

SUMMARY AND CONCLUSION

The mortality of acute appendicitis treated surgically in a small general hospital during the periods 1936-1940, 1941-1945 and 1946-1950 was found to be 3.8, 1.1 and 0.35 per cent respectively. The majority of deaths were due to peritonitis and the present favorable results were attributed to the use of antibiotics and sulfonamides in treatment. The incidence of gangrene and perforation remained essentially unchanged during the fifteen year period.

Trinity Lutheran Hospital.

BIBLIOGRAPHY

1. Abel, W. G., and Allen, P. D.: Acute Appendicitis in Children. A Review of 1,165 Cases, Ann. Surg. **132**:1093 (December) 1950.
2. Avent, C. H.; Love, C.; Newman, R., and Tendler, M. J.: Ruptured Appendix, A Survey of 541 Cases, 1939 Through 1948, Surgery **27**:862 (January) 1950.
3. Cobos, E. S. T.: 1,267 Cases of Acute Appendicitis in a Madrid Hospital, Rev. clin. espan. **38**:372 (September) 1950.
4. Ford, J. R., and Drew, C. R.: Appendicitis in the American Negro, Am. J. Surg. **80**:341 (September) 1950.
5. Fitz, R. H.: Perforating Inflammation of the Vermiform Appendix With Special Reference to Its Early Diagnosis and Treatment, Tr. A. Am. Physicians **1**:107, 1886.
6. Hawk, J. C., Jr.; Becker, W. F., and Lehman, E. P.: Acute Appendicitis, An Analysis of 1003 Cases, Ann. Surg. **132**:729 (October) 1950.
7. McGraw, A. B.: Factors Contributing to Low Mortality From Appendectomy for Acute Appendicitis: A 10 Year Study, Arch. Surg. **58**:171 (February) 1949.
8. Mitrani, J. H.: Appendicitis in a Rural Hospital. A 10 Year Statistical Survey, Am. J. Surg. **80**:221 (August) 1950.
9. Schullinger, R. N.: Acute Appendicitis, Surg. Clin. N. America **30**:495 (April) 1950.
10. Thieme, E. T.: Appendicitis. A 10 Year Survey, 1935 Through 1944. Arch. Surg. **59**:514 (September) 1949.

The Hernia Problem

. . . According to U. S. Mortality tables, hernia (exclusive of intestinal obstruction) in 1948 is listed as responsible for about 5,000 deaths, a figure which exceeded the death rate for acute appendicitis . . . this total mortality has remained nearly constant for the past two decades . . . These fatalities are . . . due to . . . complications, i.e., strangulation or obstruction. . . . There is really no excuse for the high death rate.

. . . Unrepaired hernias . . . estimated . . . as about 800,000 . . . sale of trusses . . . is said to exceed 1,000,000 per year. . . . From the patient's point of view . . . it carries a threat to life and with which normal health and activity is . . . difficult or impossible. . . . Neither . . . can be completely eliminated by the use of even a well-fitted truss. Why, then, are there so many unrepaired hernias? . . . Patients . . . seem to fear operation . . . or have associated operation with loss or diminution of sexual power.

Physicians . . . are partly responsible. The commonest hernia, indirect inguinal . . . represents a congenital defect which often is apparent in infancy or childhood . . . when repair is relatively simple and lastingly effective. Despite this, there seems to be considerable reluctance . . . to recommend infants and children for operation. It is shocking to encounter children wearing trusses . . . behavior problems are common . . . interference with normal growth and development. . . . A few surgeons have unwisely advocated postponement of herniotomy during infancy or early childhood . . . many (adults) are not referred for operation . . . because of an exaggerated conception of the risk to life or of the probability of recurrence.

Too many lives are being lost. . . . The hernia problem is a simple one which can be solved by using adequate surgery earlier and more frequently.—Robert Elman, M.D., *Archives of Surgery.*

TREATMENT OF CHRONIC CONSTIPATION IN CHILDHOOD

ROBERT J. BURKE, M.D.
ST. LOUIS

IN SPITE OF constipation being a common complaint in childhood, most cases of functional constipation can be corrected by proper supervision of dietary and bowel habits. An adequate examination with complete clinical and dietary history usually reveals an obvious cause of constipation in the child. Such instances are usually corrected in a short time by simple procedures. Often the basic difficulty lies in insufficient liquid intake or in not teaching the child to answer the call to defecate. Hard stool accumulates in the rectum and, when this stool is passed, the accompanying pain causes the child to fear defecation.[1] Emotional factors soon dominate the situation if it is allowed to become chronic. Proper instruction of the parents is an important step in bringing a solution to the problem.

Laxatives in childhood are indicated only after careful supervision of dietary and bowel habits has failed to correct constipation. Laxatives should be used only long enough to aid the child in establishing satisfactory bowel function and be discontinued at the earliest opportunity. The chief role of laxatives should be to stimulate peristalsis and to add bulk to the stools until an adequate dietary regime can be established or the danger of impactions has been eliminated. Gentle stimulation of peristalsis will make it easier for the child to heed the natural impulse to empty the bowel and to learn quickly and willingly to practice good bowel habits. Hydrophilic colloids such as the synthetic cellulose derivatives are ideal substances to increase the bulk of the stools and are suitable for use in childhood because they are nonreactive, nonallergic and nontoxic.[2, 3, 4, 5, 6]

For years favorable results have been obtained with the use of prunes as a bulk laxative.[7] Recently, a significant contribution has been made to the therapy of constipation with the isolation of a diphenylisatin, the active laxative principle of prunes.[8] Pharmacologic, physiologic and clinical investigation has shown that this isatin gently stimulates peristalsis; it is effective in small doses and is not absorbed.[9, 10, 11, 12] In 1951 Rossien demonstrated by the use of barium x-ray studies that isatin activated bulk laxatives enhanced colonic motility without undesirable side effects in chronically constipated adults.[13]

This objective study of the successful management of chronic constipation in adults with the aid of a safe, mild, natural laxative combined with synthetic hydrophilic colloids* suggested the use of the liquid form in childhood. A clinical evaluation of this mild stimulant was made to determine its efficacy as an adjunct in restoring normal bowel function in those children who did not respond to dietary management and habit adjustments. Clinical observations were made concerning the patients' acceptance of this medication since the cooperation and confidence of the child is a necessary part of corrective therapy in pediatrics.

CLINICAL MATERIAL

Clinical material for this study consisted of children between 1½ and 9 years of age; the majority were without organic disease of any type. One child had rheumatic fever, another had residual paralysis from poliomyelitis and a third child had spastic paralysis.

These children were selected from a large group of obstinate cases that failed to respond to a careful supervision of diet, fluid intake and improved bowel habits. In this study it was decided to employ this medication in small doses (one teaspoonful two or three times a day depending on requirement) for a period of ten days regardless of the duration of the symptoms of constipation.

TABLE I

AGE OF PATIENTS

Age Range	*Number of Patients*
1½ to 2 years	3
2 to 3 years	5
3 to 4 years	1
8 to 9 years	3

CASE HISTORIES

C. C., 18 months of age, was a premature child, who did not take solid foods until she was 6 months of age. She would go for three days or more without a bowel movement unless helped by suppositories or enemas. With Prulose Complex Liquid, one teaspoonful twice a day, the child developed the habit of daily soft stools.

M.B., 2 years of age, would have a bowel movement only when the mother gave an enema every two or three days. Appetite was poor and the mother had to "fight" the child to get him to eat. Multivitamins were started, and the appetite improved. Prulose Complex Liquid, one teaspoonful twice a day, was given for ten days, and the child now has a daily stool without difficulty.

L. B., 2 years of age, feared defecation because of pain associated with hard stools. The child had had difficulty for more than a year when first examined. When Prulose Complex Liquid, one teaspoonful twice a day, was given, she had a daily soft stool instead of a firm stool ever second day. After the laxative was discontinued, the child again had painful hard stools.

T. C., 2 years of age, would have a movement about

This work was carried out with the aid of a grant from the Harrower Laboratory to the Department of Pediatrics, St. Louis University School of Medicine.

Instructor in Pediatrics, St. Louis Medical School (on leave), U.S.A.F. Medical Corps, Scott Field, Belleville, Illinois.

* Prulose Complex Liquid
Each 15 cc. contains:
Liquid Prune Concentrate
(70 per cent solids) ..... 52 gr. (3.37 gm.)
Diacetylhydroxyphenylisatin .... 1/32 gr. (0.002 gm.)
Carboxymethylcellulose Sodium .. 11.5 gr. (0.75 gm.)

every second day. For a short period this child had hard stools, which caused him to fear a bowel movement. With Prulose Complex Liquid, one teaspoonful twice a day, the stools became softer, and the child no longer feared defecation and regularity was established.

L. Z., 2 years of age, was a hyperactive, irritable child. She disliked many foods and her diet lacked bulk. Ordinarily, she had a bowel movement about every third day. After Prulose Complex Liquid, one teaspoonful twice a day, was given for two weeks, she would have a movement every second day. Stools were passed without difficulty when this child received the laxative.

J. H., 2½ years of age, with a diagnosis of severe spastic paralysis with mental retardation, was most difficult to feed. The child had episodes of refusing solids and liquids; his weight was only 17 pounds. The patient often became severely constipated and had episodes of screaming. Unless relieved by enemas, bowel movements would occur once weekly. When Prulose Complex Liquid was given for a few days, the stools became more frequent, but the child was in such a critical state that most medications were discontinued.

C. M., 2 years, 8 months of age, did not like fruits or bulky foods. The child usually had one hard stool daily and occasionally cried after a movement. With Prulose Complex Liquid, one teaspoonful twice a day, the child had softer stools and did not cry because of the bowel movement.

J. R., 3 years of age, was constipated frequently in the last year. Mother stated, "He couldn't eat properly." The child had a stool every second or third day. With Prulose Complex Liquid, one teaspoonful twice a day, the child had a bowel movement at least every other day. The mother reported the child's increased activity and improved appetite.

B. C., 3½ years of age, had irregular bowel movements for more than one year. About every third day the child passed a hard stool with difficulty. After he was given Prulose Complex Liquid, one teaspoonful twice a day, for two weeks, he developed regular bowel habits and passed at least one soft stool daily. This mother also stated that the child's appetite had improved since his bowels were regulated.

C. B., 8 years of age, following poliomyelitis had residual paralysis of all extremities and some muscle groups of the chest and abdomen. The child would go for days without stools. Milk of magnesia and enemas were given without lasting improvement. Impactions were frequent. When Prulose Complex Liquid, one teaspoonful twice a day, was given, this child would have a movement about every third day.

L. E., 8 years of age, became constipated after he was confined to bed with rheumatic fever. Appetite was poor and the diet was deficient in bulk. When the patient was given Prulose Complex Liquid, one teaspoonful twice a day, he had a daily stool instead of every other day.

B. M., 9 years of age, had been "constipated all her life." The child had received mineral oil and syrup of black draught in large doses for years. Bowel movements did not occur without the aid of laxatives or enemas. The child would have a daily soft stool when Prulose Complex Liquid was given, two teaspoonfuls three times a day.

RESULTS

Of the twelve patients treated, three demonstrated an excellent response in that complete relief of constipation in a two weeks period and regular soft bowel movements were established. This condition persisted even after discontinuance of laxative medication. Six patients reported relief of constipation with softer or more frequent stools, and the remaining three patients showed relief of constipation only as long as the laxative was taken. In no instance was a lack of response to laxative effect noted.

This series of cases shows satisfactory results in the use of a new adjunct in the treatment of constipation in childhood. A soft stool was usually produced in twenty-four hours following the initial dose. Medication was given for a two weeks period because this time was arbitrarily selected as the minimum period in which evacuations could be established on a regular schedule.

This preliminary work suggests another series in which the dosage is increased and the medication continued for a longer period in those instances in which constipation is of long duration. Since some children tend to have bouts of constipation, it is felt that establishment of regular bowel habits is a major step in preventing future episodes of bowel dysfunction.

Most of the patients which had been severely constipated for more than one year showed favorable results as long as the laxative was continued. This was not surprising as these children had become accustomed to large doses of laxatives which owe their effects to irritation of the bowel.

Favorable results were believed to be due to the action of Liquid Prulose Complex on these twelve patients who were selected for the evaluation of this laxative after dietary and hygienic measures failed to bring about a response. Discussions with parents eliminated from this study a large number of children who were constipated merely because of faulty habits and dietary indiscretion.

SUMMARY

A new laxative, containing carboxymethylcellulose, prune concentrate and diacetylhydroxyphenylisatin, a synthetic analogue of the laxative principle in prunes, was administered to twelve children with chronic constipation. Response was favorable in all cases and no undesirable side effects were observed. This laxative was effective in a number of cases in which response to other laxatives had been poor. Efforts were made to educate the children and parents in establishing proper bowel habits, and instructions were given to the parents on corrective therapy and prevention of a recurrence.

16 Hampton Village Plaza.

BIBLIOGRAPHY

1. Thiele, G. H.: Constipation: Its Relationship to Anorectal Disease and to Diet and Fluid Intake, Southern M. J. 43:621-626 (July) 1950.

2. Bargen, J. A.: A Method of Improving Function of the Bowel: The Use of Methylcellulose, Gastroenterol. **13**:275-279 (October) 1949.
3. Blythe, R. H.; Gulesich, J. J., and Tuthill, H. L.: Evaluation of Hydrophilic Properties of Bulk Laxatives, Including the New Agent, Sodium Carboxymethylcellulose, J. Am. Pharm. A. **38**:59-64 (February) 1949.
4. Tainter, M. L.: Methylcellulose as a Colloid Laxative, Proc. Soc. Exper. Biol. & Med. **54**:77-79, 1943.
5. Machle, Willward; Heyroth, F. F., and Witherup, S.: The Fate of Methylcellulose in the Human Digestive Tract, J. Biol. Chem. 153-551, 1944.
6. J.A.M.A. **127**:922 (April 14) 1945.
7. Emerson, A. E.: The Laxative Principle in Prunes, Proc. Soc. Exper. Biol. & Med. **31**:278-281 (November) 1933.
8. Baum, H. M.; Sanders, R. G., and Straub, G. J.: The Occurrence of a Diphenylisatin in California Prunes, J. Am. Pharm. A. **40**:348 (July) 1951.
9. Sanders, R. G.; Baum, H. M., and Straub, G. J.: Investigation of Di (acetylhydroxyphenyl) isatin—Quantitative Excretion in Rats, J. Am. Pharm. A. **40**:340 (July) 1951.
10. Guggenheim, M.: Action of Laxatives on Colon, Schweiz. Med. Wchnschr. **55**:15 (January) 1925.
11. Katzenelbogen, S., and Güder, R.: Therapeutic Note on a New Purgative; Diacetyl-bis-oxyphenyl-isatin, Schweiz. Med. Wchnschr. **55**:18 (January) 1925.
12. Katzenelbogen, S., and Iagen, E.: Purgative Studies With Barium, Bull. General de Therap. **178**:353, 1927.
13. Rossein, A. X.: An Evaluation of the Effect of a New Istin Compound in Colonic Motility via Roentgenologic Study, Rev. Gastroenterol. **19**:487 (June) 1952.

Postoperative Care

The most scientific of postoperative care cannot make amends for the complications of slipshod or unscientific surgery, hence for optimum effectiveness postoperative care must be preceded not only by a meticulous technic of surgery but also, and just as important, by the careful observation of sound anatomic and physiologic principles. The abuse of such basic concepts of good surgery as careful hemostasis or gentle tissue manipulation cannot be neutralized by transfusions or antibiotics.

Of all the numerous factors which contribute to a successful outcome following a surgical procedure, there is none more important than careful observation. Intelligent postoperative care does not lend itself to remote control, and someone familiar with the great variety of signs and symptoms diagnostic of changes within the surgical patient's economy must pay attention and interpret these meaningful messages in the light of possible prophylactic or therapeutic action. . . .

In résumé, postoperative care for optimum effectiveness must be preceded not only by a meticulous technic of surgery but, also, of equal importance, by the conscientious attention to sound anatomic and physiologic principles. Paramount among the numerous factors contributing to a successful outcome following any surgical procedure is careful, intelligent observation. The correlation of laboratory tests with bedside patient evaluation stands out as a vital component of intelligent observation, and a detailed, sequential recording of postoperative findings must be stressed for a thorough evaluation. Multifaceted indications for mental comfort are apparent in numerous phases of postoperative care. Emphasis is placed on the judicious consideration of analgesics, barbiturates and narcotics.

In an ultimate analogy the thoughtful person finds that the essence of real success in the outcome following a surgical procedure could be the essence of success in any other field—an underlying talent or drive, infinite care for details reaching a perceptive quality, long-range thinking, and a courageous imagination.—Melvin A. Casberg, M.D., *Surgery*.

ESTRADIOL 17-CYCLOPENTYL-PROPIONATE

S. D. SOULE, M.D.
ST. LOUIS
AND
M. YANOW, M.D.
ST. LOUIS

Estradiol is recognized as the primary hormone of the ovarian follicle. For parenteral use, the injectable estradiol dipropionate is one of the most acceptable.

Recently, the cyclopentyl-propionate of testosterone has been demonstrated to be definitely more prolonged in activity than testosterone propionate. If this be true of androgens, it was deemed

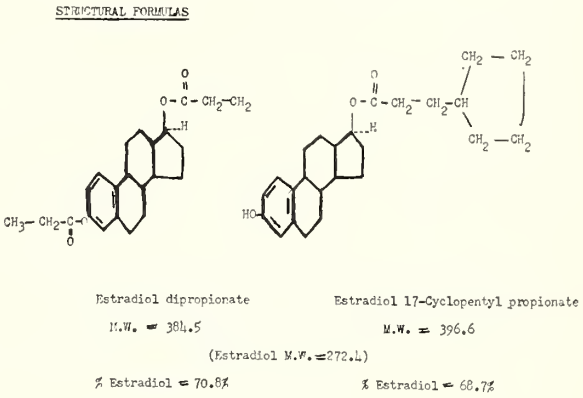


Fig. 1

advisable to investigate the corresponding ester of estradiol. A study of the 17-cyclopentyl propionate of estradiol* was undertaken to determine the activity of this derivative as compared with the dipropionate. This is a preliminary report concerned with clinical evaluation of this new estrogenic compound.

From their structural formulae and the calculation of the amount of estradiol as such in each on a weight basis it is seen that there is only a slight difference in the amount of estradiol per unit weight in the two preparations.

PROCEDURE

A group of postmenopausal women past 70 years of age and four women in their fifth decade were treated with estradiol dipropionate and estradiol 17-cyclopentyl propionate. One or the other was administered as a single injection of 5 mg. in oil. Vaginal smears were taken several days before injection and on alternate days after injection until evidence of stimulation was returned to the

From the Department of Obstetrics and Gynecology, and the Department of Laboratories, Jewish Hospital, St. Louis, Mo.
Laboratory procedures aided by grant from the Ivoshim Rachmonioth Society of St. Louis.
* Supplied through the courtesy of Dr. H. F. Hailman, of the Upjohn Company.

original status. Smears were stained with a conventional polychrome stain. After complete subsidence of evidence of stimulation, as noted by study of the smears, the other drug was administered and similar studies were made. At no time did the observor who read the slides have knowledge as to which drug had been administered to any particular patient at any particular time.

The average duration of activity as determined by vaginal smear was 22.9 days for those who received 17-cyclopentyl propionate of estradiol and 17.9 days for those treated with estradiol dipropionate. This is a ratio of 126 to 100. The duration of activity was greater in the younger individuals (50 to 60) than those past 70 years.

Such a difference is significant but is not of the order of prolongation of activity which is reputed for the cyclopentyl propionate of testosterone compared to dipropionate of testosterone.

SUMMARY

A preliminary study involved the clinical evaluation of a new estrogenic compound, estradiol 17-cyclopentyl-propionate.

A group of postmenopausal women were treated with estradiol 17-cyclopentyl propionate and with a control of estradiol dipropionate.

Activity of the drug and duration of stimulation were determined by polychrome stained smears.

The new compound, 17-cyclopentyl propionate of estradiol, resulted in a 20 per cent prolongation of activity as determined by vaginal smear. This difference is sufficiently significant to warrant more detailed study.

4500 Olive St.

Readers' Review

Ectopic Pregnancy

In a study of 136 consecutive extrauterine pregnancies the most common symptoms in order of frequency were abdominal pain, irregular vaginal bleeding and syncope. The most important pelvic finding was tenderness on manipulation of the cervix. The most valuable diagnostic aid was aspiration of the cul-de-sac with a 17 gauge needle—positive in 95 per cent of the cases. Curettage and pregnancy tests were of little value in diagnosis. In tubal pregnancy salpingectomy should be done with care to save the adjacent ovary. Other procedures such as appendectomy are frowned upon. *Ectopic Pregnancy: A Clinical Study of 136 Consecutive Cases,* Am. J. Obst. & Gynec. (November) 1952.

I would like to emphasize the usefulness of cul-de-sac aspiration as an aid to diagnosis. It is a procedure which often gives valuable information and which is relatively safe and easy to perform if carefully done. I agree with the authors that curettage and pregnancy tests are of dubious value. Francis R. Burns, M.D., Obstetrics and Gynecology, *Hannibal.*

Intravenous Pitocin:

Intravenous pitocin in a strength of 0.5 cc. of pitocin to 500 cc. of 5 per cent glucose in saline or water was used in 100 selected cases of pregnancy (50 primigravida and 50 multigravida). Both induction of labor and stimulation of uterine inertia were studied. Fifty-four patients already in labor were given pitocin with satisfactory results. However, some twenty-eight of these were merely given pitocin as a means of aiding labor and not because of uterine inertia. Cases of uterine inertia, both primary and secondary, responded satisfactorily and rapidly. Of the forty-six cases of attempted induction of labor, forty-two were successful. By selecting case with a ripe cervix a high degree of success is obtained. New to me is the suggestion that the pitocin infusion be allowed to run in nearly all cases until well after the completion of the third stage of labor. Complications were uterine tetany in three cases, undoubtedly due to too rapid start of the infusion. R. H. Kaufman et al., *Am. J. Obst. & Gynec.,* February, 1953.

There has been no greater change in the last few years in obstetrics (outside of antibiotics) than pitocin infusion. Many of us used to sit with patients receiving intranasal pituitrin and the rate of success was poor. Intravenous route adds much to induction and treatment of uterine inertia. But be judicious in its use—there are dangers of uterine tetany, danger to the fetus as evidenced by change in rate of FHB, etc. Above all, have someone there who is competent to judge rate of flow, pains, etc. J. P. Ferguson, M.D., Ob. Gyn., *Springfield.*

"Easily Established" Diagnosis of Fetal Death:

Suspicion of fetal death is difficult to confirm from the obstetrical and radiological aspects. Stephen N. Tager describes a new sign and simple technique: two roentgenograms are taken. The first is the routine A-P projection supine; the second, an A-P projection erect. If no abnormalities of the fetal skeleton are found in the supine view, and the erect view reveals a complete collapse of the fetal spine into the maternal pelvis, it is considered "undoubtedly pathognomonic" of fetal death. *Am. J. Roent., Rad. Ther. & Nuclear Med.,* January, 1952.

This is not one of the most recent articles, but, in my estimation, it is one of the most important items in the field of radiology for 1952. It is simple and effective, and in my experience, very accurate. The only difficulty encountered has been one of technique in the erect position, due to the pendulous abdomen and the large size of the mother. Sam T. Ellis, M.D., Radiology, *Hannibal.*

MEDICAL ASPECTS OF EMOTIONAL IMMATURITY IN THE YOUNG ADULT

JAMES N. HADDOCK, M.D.
ST. LOUIS

The concept of emotional maturity as a useful key to the understanding of adult behavior has recently gained considerable popularity. A best seller of a few years ago[1] elaborated on this concept in a consideration of some of the broader issues of contemporary society. In medical practice this concept is most fruitful when applied to the understanding and management of the large group of disorders considered to be functional or emotional in nature. This is particularly true in dealing with the numerous manifestations of emotional disturbance in the young adult. Young adulthood, as a period of transition from the emotional immaturity of childhood and adolescence to the maturity of adult life, is a particularly vulnerable period of life for development of emotional conflicts and personality disturbances, many of which are manifested as medical dysfunctions. These types of disorder assume a major importance in those settings such as a college health center or the medical services of the armed forces in which there is a preponderance of young adults. During experience over a period of time in these kinds of setting I have found the concept of emotional maturity to be increasingly helpful as a frame of reference for the management of these disorders.

For practical purposes one can consider the extent of emotional maturity to be distinct from physical and intellectual maturity, and evidences of the latter should not mislead one when evaluating the degree of emotional maturity. Emotional immaturity implies persistence of patterns of behavior which are more childlike than is completely acceptable to either the person involved or to his environment. There is a varying degree of impairment of the ability to give to the environment in the form of sustained interest and effort. Instead such interest and effort is demanded from others, and more may be taken from the environment than is given. Society's attitude toward such immature behavior is usually moralizing and judgmental, and this attitude tends to automatically become a part of each person to a greater or lesser extent. As a result of this the physician may oftentimes find some difficulty in accepting as a patient the person with dysfunctions arising from emotional immaturity. Instead there will be an ever present inclination to regard their difficulty as one which they have deliberately chosen and, therefore, one about which they have no right to expect help from others. Despite these obstacles the physician is finding it increasingly necessary to assume more and more responsibility toward these disorders as society's attitude toward personality difficulties is slowly but surely changing.

In order to obtain the perspective essential for a better understanding of this type of difficulty in the young adult an appreciation of the normal course of emotional development from infancy to adulthood is important. This involves a grasp of the way in which physical, emotional and social factors subtly interact as the individual grows and develops as a person. It involves recognition of the life long interaction between the person's inner needs, particularly the emotional and social, and the opportunities present in his life for satisfaction of these needs. The form these needs and opportunities for satisfaction assume are ever-changing as the person's life evolves. With such a broad perspective as a background the variety of ways in which the basic difficulty may be presented to the physician should be kept in mind. Often it may be through some isolated facet of the larger problem, and many times it may seem to be unrelated to the basic difficulty. After such problems have been accurately evaluated management can then be oriented around all of those skills and technics which will influence the patient toward emotional maturation. For in these disturbances the innate capacity to progress toward maturity is always present, and the patient only needs to be released from the restraining effect of emotional conflict in order for maturation and relief from dysfunction to occur.

YOUNG ADULTHOOD AND NORMAL EMOTIONAL DEVELOPMENT

Young adulthood, roughly the period from 17 to 25 years of age, coincides in part with the latter half of adolescence and extends well into adulthood. As such it is characterized by multiple conflicting feelings and attitudes. The tendency to cling to immature ways of relating to significant persons in the environment constitutes one pole of this conflict. At the other pole are those forces pushing toward maturity and emotional independence. Of these latter forces the two most important are (1) the innate tendency of the personality to evolve and express itself as an independent entity, and (2) the need for the person to participate in life in a mature way in order to realize the full satisfactions of adult living. This conflict can be described broadly as a clash between the mature and immature forces within the personality. Thus the immature tendency to remain dependent on others, physically or emotionally, is in conflict with the mature tendency within the same person to be independent in a way compatible with social living. Similar conflicts occur between lack of responsibility and responsibility, self-love and love of others, competitiveness and cooperativeness, and inferiority feelings and self-confidence. To further understand the significance of this concept it will be helpful to describe in more detail the course of emotional development prior

From Washington University School of Medicine, St. Louis, Missouri.

to young adulthood and the incompatibility of the more immature patterns with mature adult living.

From infancy through childhood and adolescence the most important factor in emotional maturation is the amount of satisfaction of the need for affection, acceptance and recognition experienced in the individual's relations with his parents. This affection, acceptance and recognition by parental figures plays an essential role in allowing the innate tendencies toward maturity and the capacity for social living to unfold. Experiencing this satisfaction permits growth to proceed unhampered, and immature patterns are given up one by one as more mature ways are adopted. That the rate of emotional development may be influenced within certain limits by factors such as poor constitutional endowment or brain damage should be acknowledged. But even in those relatively few instances in which these factors assume a major importance the influence of satisfying experiences in relation to parental figures is still of prime significance.

The outstanding characteristics of emotional immaturity are dependence, inability to accept responsibility, self-love, competitiveness and inferiority feelings.[2] During certain phases of emotional development these are normal characteristics, and it is only their inappropriateness during a certain phase or in a particular situation in the individual's life that gives them clinical significance. In the child, for example, some degree of conflict may ensue when the immaturity is pronounced, yet the protected status of children in our society does not allow for the disturbing degree of conflict that one sees in the adolescent or young adult. An adult with such immature patterns almost always develops conflict. For his immature ways present a varying degree of incompatibitiy with the innate tendency to progress toward maturity and with the demands made upon him by the society in which he lives. Such conflicts may be centered about one or more aspect of immaturity. The more important conflict areas will be described.

Dependence-independence.—Dependence as a characteristic of emotional immaturity may be overtly expressed, or may appear in the compensatory form of pseudo-independence. Overt dependence in the young adult may occur as prolonged financial support by parents, resort to varying degrees of invalidism, excessive demands upon love partners, or a crippling reliance on parents or other figures of authority for approval before taking action. Pseudo-independence, less easily identified, implies a greater potential for conflict. For various reasons the individual needs to deny his wish to be passively dependent by outward displays of independence. This may be expressed as an excessively early denial of need for parental support, pursuit of hobbies and occupations superficially symbolizing strength and self-reliance, and avoidance of situations in which acknowledgement of need for help is required. Mature independence contrasts with both of these by its realistic assumption of responsibility without attempting to deny the interdependence required by social living.

Lack of Responsibility-responsibility.—As the adolescent enters adulthood he is confronted with a number of responsibilities. Most important among these are selection of and action upon vocation and career, establishment of some sort of relationship with the opposite sex and assumption of responsibilities in the community. All of these imply emancipation from the type of relationship which the person has had with his parents in childhood and adolescence. Difficulty in meeting these responsibilities may manifest itself in many ways. Of common occurrence, though, are such examples as frequent shifting of vocational goals, avoidance of deep involvement with the opposite sex and continued reliance upon parental figures for guidance.

Self-love—Love of Others.—Self-love implies limited ability to have genuine and sustained interest in others and, consequently, inability to gain the reward of returned interest and attention. In the young adult this may mean almost complete preoccupation with the person's own interests and desires, inability to develop enough interest in the opposite sex to result in satisfying experiences or difficulty in liking people who differ in any appreciable degree from themselves. The demands of adult living are such that the inability to love others will inevitably result in some degree of maladjustment.

Competitiveness-cooperativeness. — Competitiveness having its origin in emotional immaturity is sometimes difficult to identify as having that significance because of the ease with which it can be confused with self-assertiveness. The latter implies a constructive motivation, while competitiveness, as in jealousy, has a destructive aim. Competitiveness based on immaturity drives the individual to surpass and dominate others as a means of enhancing his own self esteem. Mature cooperativeness does not imply submissiveness, but rather a constructive expression of the individual's contribution to society. The young adult who is more concerned in his dating with the impression he is making on others than he is about the interest and affection he is showing toward the one he dates exemplifies this type of competitiveness. Scholastic perfectionism, striving for social prestige and dominating behavior toward others are also manifestations of this trend. The guilt resulting from the hostile implications of competitiveness may add to the person's conflicts.

Inferiority Feelings—Self-Confidence.—Inferiority feelings, so often described as a "complex," are the conscious perception, however intangible, of social and emotional inadequacy. Yet the inability to clearly identify the nature of or reason for this inadequacy may result in the person involved attributing his feelings to some minor facial disfigurement, educational limitation or lack of personal charm. Such explanations are easier to face

than the realization that one has failed to experience enough satisfaction of the need for affection, acceptance and recognition to develop the mature self-confidence and security so necessary for comfortable adult relationships.

CLINICAL ILLUSTRATIONS

The effect of conflict between immature and mature tendencies in the personality is the arousal of the unpleasant sensation of heightened, dammed-up tension known as anxiety. Anxiety can be considered a signal of interference with the harmonious and integrated functioning of the person as a whole. The physiologic repercussions of this tension may be responsible for a variety of somatic complaints which may lead the person to a physician. Or the tension may appear in the form of psychologic disturbances such as recurrent unpleasant thoughts or worries, panic arising in seemingly innocuous situations or episodes of depressed mood. Any of these may constitute the presenting complaint. In many instances, though, the physician is introduced to the person's difficulty by direct reference to the particular area of life in which his conflict has centered. Among these are parental relationships, involvement with the opposite sex, selection of vocation or career and social relations in general. A description of how each of these may serve as an introduction to the patient's emotional immaturity will follow.

Through Physical Symptoms.—The physiologic manifestations of anxiety oftentimes constitute the presenting complaint and introduce the physician to the young adult's conflict over his immaturity. So frequently are these bodily complaints presented in a manner appearing to have no connection with disturbed emotions that one must be ever alert for evidences of conflict in the person's life. Some of the more common presenting complaints in such patients are pressure type headaches, drawing sensations about the scalp and neck, recurrent epigastric distress, palpitation and throbbing in various parts of the body, eczematous skin lesions exacerbated by persistent scratching, dizziness and near fainting sensations and tremor of the hands. Negative physical findings alone should not be relied upon exclusively in establishing the nature of such complaints. Just as important should be the positive findings elicited through skillful interviewing. Disturbed emotions are revealed through observation of tension, tearfulness, restlessness and the like as the patient touches on important issues in his life. This may mean resentfulness of an overprotective mother, inability to accept recently acquired responsibilities, feelings of not being part of the group with which the patient lives, or loss of the emotional support afforded by some person having a special significance to the patient at that time. The feelings and attitudes which are aroused by these issues and conflicts assume great importance in understanding the complaint. Seemingly unrelated trends in the person's life need to be connected, since the very fact that the patient is disturbed by conflicts means that he is not able to effectively integrate and harmonize them.

CASE REPORTS

Case 1. A 23 year old male presented complaints of recurrent pain and discomfort in the chest. After a series of clinic visits in which attention was focused on the cardiovascular and respiratory systems the presence of accompanying tension and apprehension led to a more detailed consideration of emotional factors. This soon resulted in a discussion of his relations with key figures in his life. He had always been submissive to an anxious, domineering mother. As he entered adulthood and opportunities for independent action presented themselves, he found himself being more and more upset by her attitudes. The persistence of this immature relationship with his mother made for an increasing amount of conflict. As developments in his career took place with their implication of increasing emancipation from his mother, his tension mounted and the chest symptoms appeared for the first time.

Case 2. A 19 year old student was first seen for the complaint of tremor of his hands of several week's duration. Though he was resistant at first to the explanation that this was a functional symptom it soon became apparent that the tremor arose in situations arousing tension and discomfort. An only child, he had contracted poliomyelitis at an early age and the resulting atrophy of one leg had added to his mother's overprotectiveness. He felt quite inadequate and weak in comparison with other children and found the strident self-expression prevalent in adolescent society to be quite disconcerting. Upon going away to college and being exposed to the usual demands of dormitory life the presenting symptom of tremor soon arose. The conflict between the immature feelings aroused in him at this time and the more mature need to face the responsibilities of group living resulted in marked anxiety, most noticeable as a tremor of the hands.

Through Psychological Symptoms.—Nearly as frequent as a mode of introduction of these patients to the physician are symptoms expressed at the psychologic level. In many instances these symptoms are so obviously psychogenic in nature that little difficulty occurs in identifying them as having this significance. In other instances it will be necessary for the physician to be alert to the feeling tone and mood expressed by the patient. Some examples of these psychologic symptoms are solwly developing feelings of dissatisfaction and restlessness, attitudes of hopelessness and despair, panicky sensations threatening to erupt in situations such as formal gatherings or meetings and persistent unacceptable thoughts such as harming someone in a close relationship with the patient.

CASE REPORTS

Case 1. A 22 year old youth was seen because of recurrent fears of being struck down at any moment by a fatal attack of poliomyelitis. This had come on after an acquaintance, a young man from his home town, had died suddenly of acute poliomyelitis. Ever

since the patient had harbored fears of this nature, along with the feeling that nothing mattered since he would die a young man. He acknowledged the irrational nature of this, yet it dominated his life. The only child of parents who had had to wait until middle age before having children he had been intensely sheltered by his mother throughout childhood. Conflict over emancipation was aroused most intensely when the time came for the selection of a love partner and marriage. A few months before the poliomyelitis death and the onset of his obsession he had brought his fiancee home to meet his parents for the first time. That night, through coincidence, his mother suddenly died of a cerebral hemorrhage. The subsequent symptom could then be understood as a reaction to the conflict aroused by his impending emancipation from a mother who still influenced him as though she were still alive.

Case 2. A 24 year old student in a professional school complained of recurring thoughts of harming his wife, much against his real desires and with much tension and distress resulting. Such feelings had come on shortly after his marriage two years previously and despite many evidences of devotion to his wife. A look at his adjustment in college soon gave some clues to the way his difficulty had developed. Always uneasy about competition with contemporaries he found himself feeling inferior and inadequate in his relations with other students. This was covered up outwardly by an attitude of hostile superiority which, in turn, led to considerable isolation and rejection by the group. With these feelings engendered in the school situation he looked to his wife for comfort and support. When this was not forthcoming to the extent he desired he developed the hostility over which he had so much conflict.

Through Difficulties in Parental Relationships.—Since the parental relationship has such an important place in one's emotional development it is inevitable that on many occasions the problem presented to the physician will be centered on this. Not infrequently the role of the parents in the young adult's immediate problem is magnified beyond its real proportions by the patient. More often it is the accumulated attitudes and feelings which existed in the parent-child relationship through the years that is reflected in the present problem. As a consequence it behooves the physician to try to appreciate how much of the present difficulty is realistically related to present conflict with the parent and how much is distortion resulting from years of conflicting relations. Such an appreciation will be advantageous to the physician in guiding him in his handling of the case, and later will be of value to the patient in his self understanding. If this is not done the physician will soon be involved deceptively in the patient's portrayal of the parents as unreasonably demanding and nonunderstanding. In so doing he will not be able to get at the patient's own participation in this unhealthy involvement through persistence of such immature traits as dependency, submissiveness and avoidance of responsibility. If any constructive change is to occur the young adult must face the responsibility of developing more mature ways of meeting his environment.

CASE REPORT

A 19 year old college girl was first seen in the midst of much emotional turmoil. As she sobbed and tossed about on the examining table enough material could be obtained to point to her relationship with her mother as the principal area of conflict. A recent letter from her mother had served to bring to a climax a struggle which had been going on for some time between them. This soon became the main content of her discussions with the physician, and was presented in a way to picture the mother's nagging and demands on her as the principal factor in her difficulty. Further exploration brought out how much her present conflict stemmed from her difficulty in choosing between a career of religion, continued college work or marriage. Her immature inability to meet the responsibility of making such a choice had been masked by the portrayal of her mother as being unaccepting and unaffectionate.

Through Difficulties in Love Relationships.—Quite frequently the event which serves to evoke conflict over immature trends is development of attachment to the opposite sex. This may occur with mere exposure to the opportunity for such an attachment, by actual involvement in such a relationship and, of course, in marriage. The latter constitutes the large area of marital problems with which medicine, religion and other fields are becoming increasingly concerned. In the physician's approach to these problems an appreciation of the disrupting effect of emotional immaturity on the close relationship demanded in marriage will contribute immeasurably to their management. The young adult who is emotionally distressed by these close attachments prior to marriage or in marriage will often present himself to the physician with complaints of disabling preoccupation with such a relationship.

CASE REPORT

A 23 year old female graduate student became increasingly preoccupied and distressed by her relationship with a boy friend toward who she had developed a strong attachment. Her school work, previously quite outstanding, dropped to an unsatisfactory level. Her insomnia, tension and moodiness ultimately forced her to leave college. A review of the development of her attitudes toward marriage soon gave meaning to her conflict An irresponsible father was held up to her by the mother as typical of all men, and this led to an attitude that one could expect nothing but the worst from men. In her dating she was constantly on guard for evidences of this, and usually found something to confirm her suspicions. Finally, though, she found herself emotionally attracted to her present boy friend and the ensuing conflict led her to seek medical help. Her immature attachment to her mother's standards would not allow her to express her own independent desires.

Through Difficulties in School or Career.—With the arrival of adulthood there is the expectation that the individual will assume certain responsibilities associated with selecting a career of voca-

tion. It may be in this area of his life development that the young adult will experience the most difficulty. Many times it may afford an opportunity for indirectly expressing dissatisfaction with parental figures, as when the son is unaccepting of the father's vocation. Other times the individual's lack of confidence and fear of failure may be epitomized in this area of his life. The selection of a vocation or career implies acceptance of many obligations which will necessitate emancipation from a dependent relationship in the home. In many instances this may loom as a threat to the young adult's adjustment.

CASE REPORT

A 23 year old graduate student found himself unable to work as effectively as usual in his studies. Continuation of this could only lead to failure, despite his earnest desire to succeed. Further exploration of his situation brought out that this was his first year in a college a considerable distance from home and his mother. An only child, his parents were divorced when he was quite young. Following this he and his mother had lived quite interdependent lives, with the mother's close attachment making it difficult for him to achieve emancipation. His undergraduate work was done at a college near home, but he had selected a college far from home in a deliberate attempt to free himself from this excessive attachment. Despite this he found himself so preoccupied with his mother (including an irrational fear that she would die) that he was unable to channel the necessary energy into his school work.

Through Difficulties in Social Relations.—This is most often seen as the "inferiority complex" of the adolescent or young adult. Essentially it consists of feelings of being unable to compare favorably with others because of some shortcoming in regard to personality, appearance, physique, intelligence and the like. The person will often complain of feeling "dull" or "uninteresting" around people, especially those of the same age group. As noted previously the young adult's confidence in his own adequacy as a person has not had the opportunity to develop fully. Most adolescents and young adults with such inferiority feelings do not seek professional aid, and often are able to "outgrow" them. However, a varying amount of "scarring" of their personalities may remain. Many such adults remain quite vulnerable to emotional stress later in life, particularly as they approach middle-age and the period of involution.

CASE REPORT

A 20 year old college girl sought psychiatric aid because of recurrent feelings of inferiority and episodes of depression. These were precipitated by the need to enter into the social life of the campus. Some years before she had had a plastic reconstruction of her nose (which was not seriously malformed) with only slight amelioration of her inferiority feelings. Nonetheless she continued to feel "dull and uninteresting" in her social life, felt undesirable as a companion and had many feelings of not being adequate. In her earlier family life she had never felt able to compete with her sisters for popularity. She remained excessively dependent on her mother, which led to much resentment of her as she was forced by internal as well as external factors to face the responsibilities of adult living.

MANAGEMENT OF EMOTIONAL IMMATURITY

Crucial to the effective management of this array of manifestations of emotional immaturity in the young adult is the recognition and appreciation of the inherent growth tendencies in these individuals. Equally important is an appreciation of the role which interpersonal attitudes play in permitting these growth tendencies of the personality to unfold. Consequently the main therapeutic tool of the physician is his personal interaction with the patient through appropriate attitude and interest. In this role the physician may easily experience discomfort. For unlike the traditional medical approach the physician's capacity to react as an understanding person is as important as his ability to react in a professional way. And it is this personal approach, designated psychotherapy in its highly skilled form, that constitutes the best method today for handling these patients.[3]

In such a psychotherapeutic approach it is essential that the physician have an appreciation of the effect that his attitudes and feelings have on the patient. Of these attitudes one can place high on the list of importance the maintenance of a nonpunitive, nonmoralizing attitude toward these patients and their difficulties. The tendency to condemn "weak" or "childish" behavior is so much a part of our society's outlook that the physician who is unable to exclude this influence from his approach to this type of patient will be seriously limited in his effectiveness. Without the presence of a permissive atmosphere the patient will not feel free to communicate his true attitudes, particularly those of an immature nature. And it is this opportunity to realize what one's real attitudes are and what effect they are having on one's adjustment that helps provide the basis for change.

As a first step in dealing with the immaturity of these patients it is only fitting that the young adult should be helped to achieve responsibility and independence through the type of relationship he establishes with the physician. The young adult can be expected to assume a large share of the responsibility for his difficulty and for doing something about it. In some cases this may mean that it will be necessary for the parent, school official or other interested person to accept a less responsible part, however well meaning he may be. In other instances it may mean that the young adult will be discouraged from seeking intervention on his behalf by the physician in order to avoid ordinary responsibilities. In both of these situations the active participation by either the physician or the parental figure will oftentimes seriously interfere with the therapeutic process. One would only be encouraging, by suggestion, the patient's immaturity.

Instead the physician and others in a parental role with the young adult should use every opportunity to encourage and foster growth and independence in the patient.

As the physician's management of these cases proceeds a frequent problem is the attitude aroused in the physician by the immaturities with which he is confronted. On the one hand there can readily occur an overidentification with the patient, resulting in overemphasis on the demands of the external world and thus allowing the patient's personal responsibility for growth to lie dormant. An equally serious error can occur if the physician allows his attitudes and feelings to become entangled in the punitive, exacting role sometimes assumed by the parent. This role will lend conviction to the patient's attitude that the world is hostile and unfriendly, a view which he has held too long and too firmly. As a constructive alternative the physician needs to convey by both word and action his confidence that a more mature adjustment is possible, even in the face of various interferences from within and without the young adult. If this attitude can be maintained the physician will not be trapped into either encouraging the patient's immaturity by berating the parental figures or into stifling all chances for personality growth by assuming the demanding role of the parent.

Channeling the energies of the immature patient in the direction of growth is a tedious task requiring time and patience. To contribute to this the young adult will need to come to grips with the core of his difficulty, his conflict over maturity. The repetitive expression of this conflict in significant relationships will have to be brought out. He may need to appreciate how he is drawn back toward a dependent relationship with his parents, and his struggle against this threat to his self-expression. In other instances it will be important to gain insight into the anxiety aroused when faced with new responsibilities, and the upsurge of resentment and frustration when it seems to him that no one is willing to give help. And still another area which may require understanding is the way in which his inferiority feelings lead him into self depreciating situations, and the frustration and conflict that inevitably results. If the patient can be helped through the experience of facing these types of issue and conflict, with all of the anxiety and resentment surrounding them, then a large step has been taken toward development of more mature patterns. For once the stalemate of conflicting forces within the personality has been broken, the energy necessary for progression toward maturity will have been released.

In summary, the concept that emotional immaturity is the basis for these disturbances carries with it important implications for their management. It keeps in constant focus the fact that it is the patient who heals himself. Accordingly, the physician's role can be described as a matter of providing a highly personalized milieu in which this healing, i.e., maturation, can occur. This does not lessen the importance of what the physician does and how he does it. If the physician is too active in giving advice, or dominates the discussion unnecessarily, or avoids important issues and conflicts which the patient is afraid to face alone, then the therapeutic process is impeded in its natural course. The physician who gives too much "reassurance" or is too sure of what the patient "needs" will interfere with healing in the same way that the surgeon does who dresses a wound too often. Instead the essential requirement is that the physician ally himself in a meaningful way on the side of the forces pushing toward maturity. And as the young adult wavers from day to day and situation to situation between old immature patterns and his newly gained maturity the strength gained through the therapeutic contact with the understanding physician will serve to help set in motion those growth and developmental processes necessary for the attainment of a mature, and healthy, personality.

BIBLIOGRAPHY

1. Overstreet, H. A.: The Mature Mind, New York, W. W. Norton & Co., Inc., 1949.
2. Saul, Leon J.: Emotional Maturity, Philadelphia, J. B. Lippincott, 1947.
3. Whitehorn, John C.: Basic Psychiatry in Medical Practice, J.A.M.A. 148:329 (February 2) 1952.

BOOK REVIEW

THE ORIGIN OF LIFE AND THE EVOLUTION OF LIVING THINGS, by Olan R. Hyndman, M.D. Published by the Philosophical Library, New York. Price $8.75.

This is a philosophical work, discussing various topics of life. In the first chapter, the author discusses life in relation to energy transformation. In the second chapter, he discusses the origin of living substances with all the theories pertaining thereto. In the third chapter, he discusses the origin and evolution of the germ integer—the first order of differentiation. Chapter four takes up the origin and evolution of the cell, which is the second order of differentiation, including a discussion of the centrosome and amphiaster. Subsequent chapters go into a further study of their differentiation including the embryogenesis. The author gives us an excellent view of chromatin.

Factors of reproduction are fully discussed, including all the orders of differentiation. The asexual and sexual modes of reproduction are explained, including a discussion of pathogenesis.

Section three of this book gives facts concerning organic evolution, and in Section four evolution, which includes a proposed theory.

An interesting chapter in the book is that on senescence and death of the individual with a prologue discussing life, what is life, animate and inanimate matter, and what is man, together with current theories and an explanation of senescence and death. There is an epilogue which takes up the future, self or species?

All in all, this is an unusual treatise and will be found quite interesting to those looking for a discussion of the philosophy of life. R.B.H.G.

Case Report

GIANT BENIGN ULCER OF THE DUODENUM

ROBERT H. RUBY, M.D.
CLAYTON

THIS IS A case report of a giant benign ulcer of the duodenum. The patient herein reported died from hemorrhage and the diagnosis was made at autopsy. The first three cases of this entity appeared in foreign literature in 1931, reported by Brdiczka. The following year Knutsson reported four cases.

In this country Freedman and Goehring reported two cases in 1940. The following year Elkin reported one case. Kahlstrom reported a case in 1944 and Evashwick reported one in 1951.

This disease is extremely fatal, no doubt because the diagnosis is so infrequently made before death. Only one case of Brdiczka's three was diagnosed antemortem. Two of Knutsson's four cases were diagnosed antemortem. Of the six reported cases in the American literature (including that presented here) only one case of giant benign ulcer, that of Freedman's and Goehring's, was diagnosed by x-ray before death of the patient. This makes an overall diagnosis of 30 per cent.

The difficulties in diagnosis have been reported in the previous case reports along with the characteristics of these ulcers.

CASE REPORT

T. S. is a 71 year old white man who first entered the St. Louis County Hospital on November 4, 1949 with the chief complaints of black stools and weakness.

The patient said he first had bright red stools three and one half days previous to admission. This lasted one day, then his stools became black. During this time he developed a marked weakness.

He stated that he had a previous bout of black stools four years before.

The past history consisted of syphilis, diagnosed and treated in 1934. The patient had a transurethral resection in 1945. He was told he had a "Charcot's joint" of the left hip. He also had had a fracture of the bones of the left leg and right ankle "years ago."

Examination—The blood pressure was 180/110, pulse 88, respiration 20 and temperature 99.2 F. degrees. There was an Argil-Robertson pupil on the left. A precordial systolic murmur was heard and also a diastolic murmur over the aortic region.

There was a right inguinal hernia.

The left leg was short and deformed; the right ankle also had a deformity.

On rectal examination no masses were felt but there was black stool on the examining glove.

Hospital Course—A proctoscopic examination revealed no abnormal findings, nor was a barium enema unusual. An x-ray did not show evidence of a Charcot's joint of the left hip. A gastrointestinal series was reported as negative.

Laboratory Examination—The admission work showed a red blood count of 4.19 million cells per cubic millimeter. The hemoglobin was 12 grams, the nonprotein nitrogen was 40 milligrams per cent. The white blood count was 6,700 cells per cubic millimeter. The urine contained 50 white blood cells per high power field.

The stool was positive for blood. The Kahn test was negative.

The diastase was 76 units, prothrombin time was 86.4 per cent of normal and the alkalin phosphatase was 3.29 units.

Total proteins were 7.3 grams per cent, albumin was 5 grams per cent and globulin was 2.3 grams per cent.

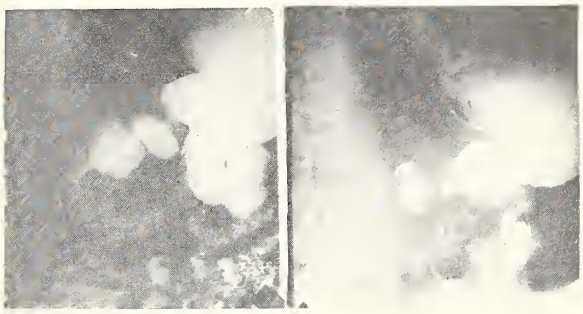


Fig. 1

The cephalin-cholesterol flocculation test was 1 plus in twenty-four hours and 2 plus in forty-eight hours. All agglutination tests were negative. The reticulocyte count was 1.1 per cent. Calcium was 10.6 milligrams per cent. Phosphorus was 3.8 milligrams per cent.

The red blood count was always above four million per cubic millimeter. The tarry stools disappeared. Aerobactor aerogenes was grown from an urine culture. This cleared up. A blood culture was negative.

The patient was discharged on November 21, 1949.

Clinic Course—The patient was followed in the clinic for two months only. After that time he did not return. A gastroscopic examination was done on December 27, 1949. There was a mild superficial gastritis. The stools were guiac negative.

The second and last hospital admission was on January 15, 1951 at which time the patient complained only of weakness and vertigo.

Examination—The blood pressure was 150/70, respirations 24, pulse 100 and the temperature was 99.4 F.

The previously mentioned findings of the left eye and deformities of the extremities were noted. The patient appeared pale. There was no tenderness in the abdomen.

Laboratory Examination—The red blood count was 1.9 million cells per cubic millimeter. The hemoglobin was 4 grams. The hematocrit was 15 per cent. The mean cell volume was 78 cubic microns, the mean cell hemoglobin was 21 micrograms and the mean cell hemoglobin concentration was 26 per cent. The white blood cell count was 17,100 per cubic millimeter, with 2 stab forms, 85 segmented and 13 lymphocytes. There was one normoblast per 100 white blood cells. The reticulocyte count was 3.3 per cent. The platelet count was 383,800; the sedimentation rate was 5 millimeters. Clotting time was 4 minutes, 30 seconds, and the bleeding time was 3 minutes, 10 seconds.

In the urine there were innumerable white blood cells. There was 1 plus albumin and the specific gravity was 1.018.

The nonprotein nitrogen was 40 milligrams per cent, the prothrombin time was 111.5 per cent of normal. The total serum bilirubin was less than 0.5 milligrams per cent.

Hospital Course—The patient was given two units of blood the first day, two the next day and three the following day. The second day the red blood count

Fig. 2

was 3.7 million cells per cubic millimeter. The hemoglobin was 7.5 grams (48 per cent), and the hematocrit was 28 per cent.

On January 19 the patient passed 150 cubic centimeters of dark red blood from his rectum. Before this, a gastrointestinal series was done and was reported as showing a temporary protrusion of the fundus of the stomach through an esophageal hiatus. There were no abnormal findings of the stomach. The duodenal cap filled out and had a reticulated appearance, but mucosal markings of the antrum and remainder of the duodenum were coarse suggesting that this may explain the reticulated appearance (fig. 1).

The following day the patient passed a stool of clots and dark red blood at 5:30 a.m., (the quantity was not noted). His blood pressure was 80/50. A hemoglobin determination showed 20 per cent. Transfusions were continued.

A Levine tube was passed at noon and the gastric juice appeared normal at first. After fifteen minutes, dark brown fluid was obtained which gave a positive guiac test. The blood pressure was 130/60.

At 4:00 p.m., in spite of suction, the patient had an emesis of 500 cubic centimeters of reddish brown fluid, even with the presence of the Levine tube. He became unconscious, unresponsive and soon expired.

At autopsy there was approximately 1,000 cubic centimeters of clotted blood in the stomach. In the posterior aspect of the first portion of the duodenum was a 5 by 3 centimeter ulcer crater, in the base of which was the eroded end of an artery with a 3 millimeter lumen. The base of the ulcer extended down to pancreatic tissue (fig. 2).

The remainder of the gastrointestinal tract was normal.

Microscopic sections showed a peptic ulcer which extended down to pancreatic tissue.

SUMMARY

Presented is the thirteenth reported case of giant benign duodenal ulcer, an entity which is rarely diagnosed antemortem.

The case herein reported was not diagnosed antemortem. The roentgen films were reviewed by the x-ray department after autopsy and they felt that even then from the films obtained it was impossible to report the duodenum as being ulcerated.

The patient died from hemorrhage.

St. Louis County Hospital.

BIBLIOGRAPHY

1. Brdiczka, J. G.: Der Grosse Ulcus Duodeni in Rontgenbild, Fortschr a.d. Geb. D. Rontg. **44**:177, 1931.
2. Knutsson, F.: Die Nischendiagnostik Bei Sehr Grossen Duodenalgeschwuren, Acta radiol. **13**:34, 1932.
3. Freedman, E., and Goehring, H. D.: Diagnostic Errors in Ulcerative Lesions of the Stomach and Duodenum, Am. J. Roentgenol. **44**:45, 1940.
4. Elkin, P. W.: Diagnostic Problems in Cases of Large or Giant Duodenal Ulcer, Radiology **37**:748, 1941.
5. Kahlstrom, S. C.: Giant Ulcer of the Duodenum, Med. Bull. Vet. Adm. **20**:451, 1944.
6. Evashwick, G.: Giant Benign Duodenal Ulcer, Ann. Surg. **133**:417, 1951.

BOOK REVIEW

PRINCIPLES OF REFRACTION, by Sylvester Judd Beach, M.D. Published by the C. V. Mosby Company, St. Louis. 1952. Price $4.00.

This compact book is a concise monograph covering the methods of refraction used by the author over a period of years in his own practice of ophthalmology.

The subject matter is written essentially from the standpoint of the clinician in office practice. The author has used many well defined and practical illustrations to clarify and simplify the underlying principles that are applicable to the refraction of the patient's eyes and the prescribing of proper spectacle lenses.

The style is informal but certainly it is interesting and informative. There is a complete absence of mathematical formulae and of complicated and involved problems of theoretical physical optics. Both bibliography and reference are omitted as this work makes no pretense of being a complete or exhaustive text.

The material on retinoscopy, cycloplegic and subjective examination is rather complete and the author shows no prejudice or protagonism concerning the merits of the various methods. It is apparent that he considers each method to have its indications and worth.

The chapter on ocular neurosis deals with the many patients who have ocular or visual complaints that are functional in nature and properly belong in the field of psychosomatic medicine. Here the author has charted the guidepost of symptoms and the suggested therapy again in a simple and practical manner.

This book is recommended to the practicing refractionist and to the student or resident as a readily understandable outline and reference. It deals with the human side and the art of medical practice rather than the pure science, speculation and theory found in the more complete and detailed treatices on the subject of optics and refraction. S. H. M.

Special Article

THE PHYSICIAN AS A CITIZEN

SAMUEL S. MAYERBERG, D.D.
KANSAS CITY, MO.
Rabbi, Congregation B'nai Jehudah

THE PHYSICIAN is indispensable to modern civilization and to human progress. This is no platitudinous assertion but is, in reality, a continuation of the respect given medical men even in ancient times. We find in the apochryphal Book of Ecclesiasticus, which was written at least two centuries before the common era, that the physician was not only respected but was considered to be an instrument of God. In the 38th chapter of Ecclesiasticus, we find these significant lines:

Honour the physician for the need thou hast of him: for the most High hath created him.

For all healing is from God, and he shall receive gifts of the king.

The skill of the physician shall lift up his head, and in the sight of great men he shall be praised.

The most High hath created medicines out of the earth, and a wise man will not abhor them.

The virtue of these things is come to the knowledge of men, and the most High hath given knowledge to men, that he may be honoured in his wonders.

By these he shall cure and shall allay their pains, and of these the apothecary shall make sweet confections, and shall make up ointments of health, and of his works there shall be no end.

My son, in thy sickness neglect not thyself, but pray to the Lord, and he shall heal thee.

Turn away from sin and order thy hands aright, and cleanse thy heart from all offence . . . and then give place to the physician.

For the Lord created him: and let him not depart from thee, for his works are necessary.

For there is a time when thou must fall into their hands:

And they shall beseech the Lord, that he would prosper what they give for ease and remedy, for their conversation.

This ancient acknowledgment of the respect and confidence due the physician is carried over into modern society where the able and conscientious physician occupies an enviable status, but this esteem and acclaim given to the physician by the people in general carries a corollary responsibility and sense of obligation on the part of the physician.

It is probable that the average physician realizes that while he earns the esteem of the public, he does not often recall that he is also heavily indebted to his patients and to thousands of others who helped him acquire his highly technical and profound education. It is not erroneous to say that no physician ever pays for his education. No matter what his tuition cost him nor the expense incurred during his college years, the physician, at best, pays only a portion of the vast sums required to supply the manifold branches of his knowledge. It would be a high estimate if one should say the physician pays at least half the cost of his education. Factually, the cost of maintaining universities and medical colleges, plus all the research institutes and hospitals, would be far more than half the cost of a physician's training. Medical science, as we know it today, and the practice of medicine, as we see it today, would be impossible without the expenditure of vast sums supplied by taxpayers and by munificent gifts bestowed by generous-hearted benefactors upon institutions of learning. Therefore, the average citizen has a right to feel that the capable physician who serves him is also indebted to him; and he also has a right to expect that, because of the honored status of the physician in the community and because of his high endowment with attributes of mind and personality, the physician will be an exceptional citizen in the extracurricular service he renders the community. To put it plainly, a physician who is only a physician need not be considered a good citizen any more than a business man who is just a business man shall be reckoned as a worthy citizen. In truth, it would seem that the gauge by which we measure men should not consist of what a man possesses physically or mentally, but rather upon the degree of his service to the community. A man's worth should be measured by the difference between that which he takes from society and that which he gives back to society in the terms of service that makes for the advancement and the betterment of the community and country in which he lives.

Perhaps I should be specific on the subject of physician as citizen. Before he is a physician, he is a human being and a part of his community and, while he renders his indispensable professional service, his real worth will depend upon the manner and the attitude with which he renders that service, especially in view of the debt he owes others for his education. One direct manifestation of the physician's attitude is in his acceptance or rejection of night calls.

I realize that there are two sides to the subject and I also know that many patients wait until the small hours of the morning to summon a physician when they might, by using good sense, call him at a reasonable hour. But physicians should realize that, because of the very nature of their work and the high position they hold in society, they must expect some time to be imposed upon by unrea-

sonable folk. Some time the refusal to respond to a call might mean the very loss of life. The physician who brings a sense of dedication to his work will humbly face this unpleasant and exacting duty with a determination to maintain the high ethics of his profession, no matter how selfish and unreasonable his patients may seem.

The physician should also realize that many people have no regular family physician and when the times of illness suddenly come upon them they must turn in desperation to some doctor who is unknown to them as they are to him. It is probable that this desperate call will come in the wee hours of the morning. Shall the doctor then say to himself, "I do not know these people—let them call someone else—"? If that were the general attitude, many people would perish before they could receive help. Certainly, the patients a doctor customarily serves can, with patience, be trained by him to call him at respectable hours when his services are actually needed. It would seem in this era when so much emphasis is being laid upon socialized medicine with all of its consequent ills that physicians everywhere would promote the best possible friendly relationships with their patients or with their potential patients.

As a citizen, the physician may exercise an influence in the life of his patient which cannot be wielded by any other person except, perhaps, the minister. The patient who trusts the skill and the character of his doctor confides in him to such an extent that the medical man actually knows his patient inside and out. Therefore, the physician who has a deep-rooted faith can, in a few well chosen phrases, or even by an occasional observation, give his patient a psychical and spiritual foundation which, in the case of health, will prove far more effective than many medicines. The real physician must not only heal a body but frequently he must heal a heart and a soul. Sometimes the physician's personality is just as important as his knowledge and his skill. Since the doctor has such mighty prestige in the mind of the patient, he can exert an influence in the thinking and action of those under his care. Accordingly, the physician should be conversant with other subjects not directly related to medicine. The general culture of a physician gives him a wide range of approach to anyone he serves.

There are many civic problems with which the doctor who values his citizenship should be concerned. The elimination of "skid rows," of blighted areas which are conducive to ill health and which often produce crime, delinquency and disease, should offer a challenge to any civic-minded physician and should cause him to take dynamic leadership in the correction of these evils. The doctor ought to feel that he has an unusual opportunity in view of his high prestige and powerful influence to lead and direct any movement that will eradicate cesspools of disease in his community and to correct bad housing conditions which are frequently the cause of epidemics. The physician with private practice who is far more familiar with community conditions than the average layman should be the outspoken advocate of intelligent and efficient public health service in his town or city under the direction of a well trained, earnest and faithful public health officer. In other words, the doctor who is a good citizen will be the champion of any movement that reduces the menace of illness in his community. I think it can be said axiomatically that preventive medicine is basically more important than medical cures.

The physician who is deserving of the title of good citizen will meticulously maintain the Oath of Hippocrates and the modern medical code of ethics. He will abhor as he would a pestilence the unethical practice of fee splitting which works to the painful detriment of the patient and which harms the whole medical profession.

Medical knowledge alone does not make the doctor a good citizen but the application of his character, personality and ability can make him a citizen of honor who deserves the respect and love of the people.

Reader's Review

Wringer Injuries:

Treatment and results of 142 children crushed in washing machine wringers, surveyed by MacCollum, Bernard, and Bauner. Treatment consisted of cleansing with saline and Phisoderm, and pressure dressing. Removal of the dressing and examination of the extremity every 12 hours is of paramount importance. Subcutaneous collections of fluid and blood were drained surgically as soon as found, in an attempt to prevent additional skin necrosis. *New England J. Med.*, November, 1952.

This paper demonstrates clearly the advantages of early drainage of subcutaneous collections of fluid in this type of injury. Of the 23 cases seen early that required drainage, only one had additional skin slough. An identical number, seen late, had slough of the overlying skin, since subcutaneous fluid collections had not been evacuated. William H. Snead, M.D., and Erin M. Dillard, M.D., Orthopedics, *Springfield.*

Radioactive Phosphorous in Blood Dyscrasias:

B. J. Duffy, Jr., and J. W. Howland report favorably on the use of radioactive phosphorous in polycythemia vera and chronic leukemia. It is also considered a valuable adjunct in the treatment of chronic leukemias. As a diagnostic tool, P32 is recommended for studies of circulatory efficiency in peripheral vascular diseases, as well as an indicator of therapeutic effect or prognosis. *New York State J. Med.*, March, 1952.

Indeed, radiophosphorous is valuable as a treatment of polycythemia because of the ease of therapy, plus the simple management. In the chronic leukemias it is most worthwhile to have in the cases that are resistant to x-ray therapy, in other selected cases, as a support for this radiation. F. T. H'Doubler, Jr., M.D., Radiology, *Springfield.*

Wherever You Go...

On the road to vacation? Then a Blue Cross-Blue Shield membership card is as essential as razor and toothbrush . . . for it is recognized nation-wide as a passport to the best in health care.

In Blue Cross an inter-plan bank gives members away from home full service benefits of their host Plan. Blue Shield pays licensed Doctors of Medicine anywhere.

Or perhaps it's a move of residence to another part of the country. Then a simple inter-plan transfer moves Blue Cross and Blue Shield membership right into the other Plan, with no loss of earned waiting periods.

For the best protection, wherever you go, it's BLUE CROSS and BLUE SHIELD!

Kansas City

Saint Louis

BLUE CROSS
BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

"I'M TOO BUSY"

Anyone who participates in voluntary organizational work in our profession soon finds himself particularly obstructed by the above phrase. This is particularly evident when he attempts to solicit the efforts of others. Paradoxically, it is almost axiomatic that if you want to get a job done, pick on the busiest man you know and he'll do it!

We made a personal survey of several general practitioners who everyone knows are busy men, darned busy. We asked each of these practitioners, in separate conversations, a few leading questions. For instance, "Do you ever get time to attend church? What about going to a show? Do you have time to play golf, bridge, poker? What hobbies do you have and do you have time to follow them?" These questions lead to the following conclusion: Everyone actually "has the time," if he just wants to do something bad enough!

Obviously, there are some few "sorry" days in any physician's routine, where extraordinary or unusual circumstances arise. These absolutely preclude stopping "to have a Coke" or any other such activity, usually meaning from 15 to 30 minutes up to an hour, in just plain "chewing the fat." When a fellow is tired, perhaps has been up most of the night, it's difficult, almost impossible, to settle down for any constructive effort, mentally or physically. He doesn't want to think, study or write. He just wants to sit!

Whenever we hear a colleague tell about some comedian, "I heard last night on the Blah-Blah Hour, and, boy, was he a riot"; just watch out. The phone will ring, and you'll hear that same guy say, "No, Mrs. Jones, I just haven't had time to phone in that prescription to the druggist for your boy. You know there's a flu epidemic going on, and all of us doctors are just worked to death. So I just haven't had time; I've been too busy . . ." Oh, yeah?

VINCENT T. WILLIAMS, M.D.

The Last "From Within"

In our previous short editorials captioned "From Within," we pointed out how we started from scratch in the Colonial days—without medical schools or practice regulation. We merged into a status of well defined licensure regulations and many medical schools. Some schools were poor, some indifferently good and some were excellent. Due to the efforts of the American Medical Association the poor schools were either eliminated or brought up to a Grade A standard so that today we have only Grade A medical schools.

Next came hospital standardization with resultant enormous improvements beneficial to patients, nurses, interns and doctors. At all times doctors have tried to prevent disease. It would appear that they were trying to get themselves out of a job. Preventative medicine, hygiene and public health have come right along in the wake of improvement in medical practice. Our surgical triumphs and our conquests over diphtheria, tetanus, typhoid, tuberculosis (especially the bovine type in humans), malaria, diabetes and many other diseases need only be cited. The list of new miraculous drugs is too long to enumerate.

The research that has gone on and is going on is stupendous. Now all that has transpired—all the improvements touched upon—have been carried out by members of our own profession. They perceived the need for improvement and brought about the needed changes. This often meant seeking legislation and the enactment of laws—especially as regards vaccination, quarantine, treatment of public water supplies and public health measures. Today anterior poliomyelitis defies our efforts but we are about to conquer it.

The important thing to notice and remember is that the perception of a needed change, the conception of how to effect this change and the actual carrying out of the idea started from within our ranks. No outsider noticed needed changes, demanded them in the name of the law, or brought the changes about. The reason why everything has

worked out so well is that the men concerned with all these things have been doctors working voluntarily to improve conditions. They, better than anyone else, could understand the situations involved and their repercussions. That is why it has all worked. Now, in view of all this, why in the name of Tophet should we turn the wheel over to stupid or greedy, or, at the best, ununderstanding politicians and starry eyed idealists no matter how many academic degrees they have in the fields of sociology, humanities or psychology?

This is the last "From Within." We feel that we have made our point.

F. T. H'Doubler, M.D.

Defense—Against Offense

An article in the *Kansas City Star* came to my attention the other day. Published in February, it consisted of a reprint of a piece in the *Jackson County Medical Society Bulletin* written by Dr. G. Wilse Robinson, Jr. Dr. Robinson issued an admonition to the medical profession on the subject of night calls. In particular, it had to do with night calls that were *not* being made in answer to apparently anguished entreaties from a desperate public, beleaguered by nocturnal illness and neglected by those charged with its succor.

I would not deny Dr. Robinson's right to say anything that he pleases for publication. By the same token, I reserve the right to quarrel with Dr. Robinson, and to publish my opinion of his captious criticism. His "appeal to every member of our society" was, in my judgment, a dreary, dismal diatribe, based on the broadest of generalities, and so far as I could tell from the press interpretation of his *Bulletin* article, containing no instances of actual neglect. I have not read the original article, because I am concerned only with the version that was given to the public.

Dr. Robinson asks some puerile questions, such as: what would happen if policemen, firemen, streetcar and bus operators, milkmen, and night nurses refused to bestir themselves at night? At the risk of sounding unduly petulant, I should like to ask in reply: what would happen if these same night workers were denied their reliefs at the appropriate hour in the morning?

I should like to remind the Doctor that the public press is simultaneously an instrument for good and for harm. No one will deny that in a group of physicians numbering some 200,000, there must be more than a few chiselers, racketeers and generally unsavory characters. Fortunately, these are in a gratifyingly small minority. In the interest of public relations, it might be well to point out the virtues of the majority in the same breath that we castigate the few who bring discredit upon us. Dr. Robinson, I am afraid, has been propagandized by the expensive brush with which the Roosevelt-Truman-Ewing hirelings painted the American medical scene.

Jerome I. Simon, M.D.

Headaches and Back Pains

Headache is one of the most frequent complaints and difficult diagnostic problems that a physician encounters. It should be recognized as a symptom which may be due to infections, anemia, vascular disease or allergy, or may result from disease of the eyes, ears, nose or throat. Pathophysiologic changes occurring as migraine or histamine cephalgia or neuralgia, may appear as headache. Certainly some headaches are psychogenic in origin.

Since headache may be the first symptom of central organic disease, the physician must be alert for early recognition of intracranial space occupying lesions. Brain tumors probably occur as frequently as one in every two hundred deaths.

Certain brain tumors may give rise to headaches of localizing value but, as a rule, location of a headache is of no significance. The familiar picture of severe headaches, associated with vomiting without nausea, suggests only generalized intracranial hypertension. Air studies, angiography and radio-isotopes are therefore great adjuncts in the localization of intracranial lesions.

Low back pain, with or without radiation, is a frequent complaint, distressing to the physician and patient alike. These symptoms may be due to developmental anomalies or acquired defects such as spondylitis, acute and chronic arthritis, myositis, ligament and tendon strains, and any infectious process. Back pain may likewise be psychogenic.

Of prime importance is neurogenic back pain. Diagnosis is based on the character, radiation, and localization of the pain, relation to trauma or infection, and presence of paresthesia, anesthesia or sphincter involvement, and motor disturbances.

The relationship of pain to position and exercise is helpful; ruptured intervertebral disk pain is accentuated by sitting, bending with the knees extended, coughing, sneezing and straining.

Pain from a spinal cord tumor, although similar to disk pain, is frequently increased by bed rest, to the extent that patients literally walk the floor at night to get rest. Cord tumors more commonly produce sphincter disturbances.

Spinal fluid studies and myelographic investigations are valuable aids for the proper diagnosis and exact localization of these lesions.

William Q. Wu, M.D.

Fraternally Yours

Our New President—E. Claude Bohrer, M.D.

With the recent induction into office of our new President, the profession of our state honored a worthy occupant. Personally, while not intimately acquainted with Dr. Bohrer, we decided to do a little research: All we could find out about this man was good!

Born in Missouri, in August, 1892, his family early moved to West Plains, where he was graduated from high school in 1910, winning the first scholarship ever awarded. After high school, he worked as a postal employee. He then branched off into pharmacy, in his father's drug store. After two years in the University of Kansas City College of Pharmacy (where he won the highest grades for both years, as well as a medal, the highest award in chemistry), he returned to the drug store. With this background came the realization that he wanted to be a physician—"I wanted to know more about medicine than just how to compound it."

He continued his winning ways at Missouri University premedic school with the high award as a freshman, and became an assistant in physiologic chemistry. He won the Rollins Scholarship and was elected to Phi Beta Kappa and to Sigma Xi. In 1922, he received his M.D. from Washington University, and was elected to Alpha Omega Alpha.

"I worked behind the drug counter of my father's store, every summer until the year of my internship at City Hospital in St. Louis. After that, I gave up pharmacy for medicine, and turned the drug store over to my younger brothers."

Back in West Plains, Dr. Bohrer has had a busy life. As he states it, "things have been happening at a pretty rapid clip ever since, for there is nothing routine about a small town doctor's work. He must practice all phases of medicine and specialization is impossible."

Besides his professional attainments, Dr. Bohrer is a prodigious reader and man of many hobbies. He is particularly proud of his old, rare medical books. "These are real treasures, they were given to me by older doctors or out of second-hand bookstores. One of them was published in 1680, and its contents are rather startling to a modern doctor."

His love of music, first demonstrated as a youthful member of various glee clubs, has continued through the years. He is a camera fan, lately concentrating on color photography.

Besides his present honor, he has served as President of the Howell-Oregon County Medical Association, President of the Missouri University School of Medicine Alumni Association, Councilor of the Ninth District, Missouri State Medical Association, in addition to various other professional distinctions. He is a member of the American Academy of General Practitioners, the American Trudeau Society, American College of Physicians, a Director of the Missouri Tuberculosis Association, Director of the Missouri Cancer Society, and a Trustee of the Missouri Medical Service.

He has served as president of the School Board for fifteen years, and has worked in other civic activities. In 1924, he married Thelma Evans, daughter of Dr. Paul Evans, one of the Ozarks' most noted horticulturists. The Bohrers have two children, Joan, a Phi Beta Kappa from Washington University, and Paul Evans, a student at Drury.

"I have maintained for years," he says, "that the solution for the rural health problem is not only the acquiring of doctors, but the establishing of community hospitals . . . the doctors won't come without hospitals, young doctors not only hesitate, but refuse, to move into rural or semi-rural communities. So without hospitals the problem of improving rural health conditions is almost insurmountable."

"That is one of the things I hope to concentrate on while I am serving as President of the State Medical Association in 1953. Many Missouri communities are already making great strides by building hospitals in some of the small towns. They have drawn highly trained young doctors into the area, not just for the towns, but into rural sections as well. We will rest when we have hospital accommodations adequate for every community, however small."

With this background, it is readily apparent that in our new President, we have a man who represents the best traditions of our profession. Born, nurtured and developed from the very grass-roots of our state, acclaimed as an outstanding student in one of our best medical schools, returning to his native habitat to become an exemplary professional and civic leader in his community and throughout the state—we congratulate Dr. Bohrer, and our State Association. —V.T.W.

Musings at the Annual Dinner

As we looked about the banquet room we felt a great surge of pride over our medical society and the members' wives. We do not believe that anywhere or at any time a finer group of people have been brought together. It is a crying shame that in the last twenty years—due to continued unfair bombardment—the doctors have lost some of the great public respect which is their due. We have been put in a wrong light so long that it will require efforts on our part as well as a new, fair and respectful attitude on the part of our government to place us back where we belong in the people's affection, respect and pride.—F. T. H'Doubler, M.D., *Bulletin of the Greene County Medical Society.*

Missouri Medical Meetings

May 2-4: Missouri Public Health Association, Hotel Governor, Jefferson City.
May 11-14: American Urological Association, Jefferson Hotel, St. Louis.
May 25-28: Catholic Hospital Association, Municipal Auditorium, Kansas City.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laciede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

A state-wide Conference for County Health Councils was held at Memorial Student Union Building, University of Missouri, Columbia, on March 25, 26. The sponsors were the Missouri Health Council, the Department of Rural Sociology and the Adult Education and Extension Service of the University. Some 200 people, representing all sections of the state, attended and took part in the deliberations. Those present were divided into five working groups. Each group was under the direction of a group leader and summarizer. The subject for consideration was "Local Health Councils," with the five groups using the "Old Town Meeting" procedure in the discussions. This method of operation brought forth the actual problems confronting those in attendance who were working with local community or county health councils. Some of the most vexing problems seem to be: developing proper leadership, financing, securing physician interest and participation, sustaining interest of key people and selling to the public at large the potential value of a local health council as a vehicle for cooperative, concerted, group action in improving local health conditions.

At a banquet on Wednesday night, March 25, Dr. C. E. Lively, Chairman, Department of Rural Sociology, University of Missouri, gave the main address. He spoke on "Are Health Councils Necessary?".

The final session on March 26 was given over to reports of the summarizers from the five discussion groups, followed by a "Final Appraisal and General Summary" by John H. Lane, Jr., Assistant Professor of Rural Sociology, University of Missouri.

The Committee on Extension of Hospitals and Other Facilities, Council on Medical Service, American Medical Association, sponsored a conference on Physicians Placement Service Activities at the Peabody Hotel, Memphis, Tenn., March 28, 29. The State Medical Associations invited to participate in this conference were: Alabama, Arkansas, Georgia, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas and Virginia.

The purpose of this get-together was to discuss the activities of the States represented as to physician placement and to consider ways and means whereby the A.M.A. might be more helpful to all state medical associations in their efforts to locate physicians.

Representatives of the States present gave the group an explanation of their procedures in physician placement. These include the maintenance of lists of doctors seeking locations, lists of communities needing doctors, State maps indicating where doctors are now located with ages recorded and lists of interns and residents under training in the State. The amount of information carried by State associations as to the lists just indicated varies a great deal. Some maintain considerable detailed information on the doctors who

contact them on locations as well as the community attractions of those places wanting physicians—others maintain only brief explanatory material. The information kept by the placement services is secured by questionnaires, personal letters and interviews, from local medical society officers and field trips.

Some placement services work closely with communities which are willing to furnish office of clinic facilities as well as living quarters on a business basis to attract doctors. Some also meet with interns, residents and senior medical students to discuss factors relating to locations.

The Council on Medical Service of the A.M.A. sends to all State associations who have asked for such, the names of doctors contacting them for location information in those particular States. For the same States any community requests for doctors are referred to those specific States.

Most State Placement Services list with the A.M.A. Council the location information of those respective States.

A conference of this nature provides an excellent opportunity to glean ideas from others and to pick up procedures that are producing results.

The Missouri State Medical Association was represented at this Conference by Dr. A. E. Spelman, Smithville, Chairman, Committee on Rural Medical Service, and by Yours Truly.

Members in the News

The third annual Memorial Lecture at the Menorah Medical Center, Kansas City, was presented on April 6 by **James C. White**, M.D., Boston, on "Surgery of the Autonomic Nervous System, Its Indications and Limitations."

Thomas Dobbins, M.D., Hillsboro, who established the Health Unit in Jefferson County in 1950 has resigned and will take an extended vacation.

In preparation for the Board of Life Insurance Medicine, **Gordon P. Barnett**, M.D., Kansas City, attended lecture courses in New York City, in March.

Under the direction of **Lauren V. Ackerman**, M.D., St. Louis, Washington University was host between March 31 and April 4 to meetings of the American Association of Pathologists and Bacteriologists, the International Association of Medical Museums and a special seminar on "Diseases of the Lungs."

More than aware of current student nurse shortage, but willing to do something about it, is the Jackson County Auxiliary. Under the supervision of **Mrs. Clark Seely**, a reception was held at Menorah Hospital on March 25 for junior and senior high school students interested in nursing. Representatives from schools of nursing in Greater Kansas City were present to answer questions as well as to help the students make arrangements to enter the school of nursing of their choice.

The Missouri State Senate has confirmed **James R. Amos**, M.D., formerly of Springfield, as Director of the Missouri Division of Health.

The **Carl Zimmermann** Lecture, delivered in Cape Girardeau, by **Ben Eiseman**, M.D., St. Louis, was on "The Role of Surgery in the Treatment of Peripheral Vascular Disease." The *Cape Journal* reported: "It is our privilege to compliment Dr. Ben Eiseman on maintaining the high standards of the preceding essays . . ."

The annual **Hanau W. Loeb** Lecture, sponsored by the Alpha Pi Chapter of the Phi Delta Epsilon Medical Fraternity, St. Louis University School of Medicine, was presented by **James H. Means**, M.D., Boston, on the subject "Need for Iodine."

Amsterdam, The Netherlands, is the scene of the Fifth National Congress for OALR, at which **S. Richard Silverman**, M.D., St. Louis, will speak.

"Changes in Surgery During the Past Decade" is the subject of the fourth annual Dr. **F. G. Thompson**, Sr., Lectureship, to be presented by **Robert S. Dinsmore**, M.D., Cleveland, at St. Joseph on May 28.

Retiring Professor of Clinical Ophthalmology, **Lawrence T. Post**, M.D., St. Louis, was honored by Washington University on March 28 at a testimonial dinner.

The American College of Surgeons, meeting in Los Angeles, March 30 and 31, featured Missouri speakers, **Carl A. Moyer**, M.D., and **Thomas H. Burford**, M.D., St. Louis.

Dr. and Mrs. E. Claude Bohrer, West Plains, vacationed briefly in Florida during February.

Representing St. Louis University at the Tri-State Clinical Conference on Tuberculosis on March 1, were Drs. **Paul Murphy, William A. Werner, J. C. Murphy, Joseph L. Lucido, Ellis S. Lipsitz** and **W. E. Kistner.**

Point Clear, Alabama, was the vacation spot for **Dr. and Mrs. Joseph B. Cowherd**, Kansas City, two weeks in March.

Missouri Valley College awarded a Citation of Merit "for his outstanding service and achievements in church and professional leadership" to **Robert M. Myers**, M.D., now chief of staff at Trinity Lutheran Hospital, Kansas City.

Tom Otto, M.D., Cape Girardeau, attended a meeting of the American Academy of Orthopedics in Chicago on January 23 to 28.

After attending the New Orleans Graduate Medical

Assembly meeting, **Otis E. James, Jr.**, M.D., Kansas City, visited the Warm Springs Foundation where he obtained information on the latest treatment of poliomyelitis.

R. A. Ritter, M.D., Cape Girardeau, spoke at the district meeting of the Missouri Division of the American Cancer Society at Fredericktown on February 5.

The General Practitioners Study Club in Overland, on February 18, has as guest speaker **Julius Jensen**, M.D., St. Louis. His subject was "Coronary Disease."

The Southwest Allergy Forum will meet at the Hotel Muehlebach, Kansas City, June 14 to 16, with **Orval Withers**, M.D., Kansas City, presiding as president.

Dr. and Mrs. Durward G. Hall, and their daughter, Linda, Springfield, recently returned from a steamship trip to Brazil where Dr. Hall attended the Inter-America Session of the American College of Surgeons at Sao Paulo. They also spent some time in Rio de Janeiro.

Kenneth Glover, Mount Vernon, has been appointed county physician by the county court of Lawrence County.

Bruce Lemmon, Jr., M.D., Springfield, played one of the lead roles in the Little Theatre production of "Bell, Book and Candle" which was given at the Springfield Art Museum the first week of March. Dr. Lemmon is a charter member of the Little Theatre group and has played many leading roles, the latest including "Guest in the House," "The Drunkard" and "East Lynne."

Drs. Jordan and **Douglas Keeling**, Waverly, received Citation Awards of Merit at the 65th anniversary convocation of Missouri Valley College held February 27 to March 1 at Marshall.

Francis Todd H'Doubler, Jr., M.D., Springfield, spent the month of March in Oak Ridge, Tennessee, studying the technics of using radioisotopes. Dr. H'Doubler was enrolled in a four week course offered by the Special Training Division of the Oak Ridge Institute of Nuclear Studies. The class, the thirty-second of its kind to be offered by the Institute, was limited to thirty-two participants.

A recent reunion of the Class of '96 of the old University of Kansas City was attended by **J. E. Donaldson**, M.D., Kansas City. Dr. Donaldson received a 50-year service emblem from the Missouri State Medical Association several years ago.

William A. Sodeman, M.D., chairman of the Department of Tropical Medicine and Public Health at Tulane University, New Orleans, will become chairman of the Department of Medicine at the University of Missouri School of Medicine on July 1.

As delegates to the assembly of the American Heart Association, **A. Morris Ginsberg**, M.D., Kansas City; **Drew Luten**, M.D., St. Louis, and **Horace W. Carle**, M.D., St. Louis, attended the meeting in Atlantic City early in April.

New office space consisting of eighteen rooms was recently opened in Savannah by **Gilbert Kelley**, M.D., **Forest C. Long**, M.D., and **Ralph Kelley**, M.D. The one story building houses full clinical facilities, including x-ray, laboratory and drug room, and is on a lot large enough for an adequate parking area. Guests at an open house held the end of March, both lay and professional, were enthusiastic about the facilities. It was also announced that Doctors Kelley and Long will have a new associate, Dr. **Warren C. Baker**, currently at Missouri Methodist Hospital.

Described as "head and shoulders above any who have been head of (State Hospital) No. 2 in three decades," **Orr Mullinax**, M.D., St. Joseph, was the subject of a "Timely Observations" column by *News-Press* Editor, Arthur Burrowes.

The Oklahoma State Medical Association, meeting in Tulsa in April, featured presentations by **Wendell G. Scott**, M.D., and **Carl A. Moyer**, M.D., St. Louis.

Kansas City, Mo. Medics **William H. Duncan**, M.D., **Charles H. White**, M.D., **Sam D. Hoeper**, M.D., and **Wallace Graham**, M.D., (the latter personal physician to ex-President Truman) are reported in the press to be off to Peru "on a secret medical mission" early in April.

New president of the Los Angeles Surgical Society is Dr. **Ralph V. Byrne**, formerly of St. Joseph. Dr. Byrne is associate clinical professor of surgery at the U.S.C. School of Medicine.

Atwood Hospital, Carrollton, was recently purchased by staff member Dr. **John H. Platz**.

Administrative policies and methods of operation of the new Olathe, Kansas, Community Hospital will be patterned after those of Lexington Memorial Hospital. The Kansas group, seeking advice about their own hospital, were referred to Lexington by a manufacturer of hospital supplies.

For the third time, the citizens of Carthage voted down a proposed bond issue for an addition to the McCune-Brooks Hospital.

Returning from a call, Dr. **J. H. Bridges**, Bolivar, was severely injured February 12, when he lost control of his car on a curve.

The *St. Charles Banner-News* reports that two of five local doctors and dentists called for physical examinations by the County Draft Board, were rejected. One, Dr. **George Sasaki**, O'Fallon, was the subject of a 1,500 signature petition to declare him essential.

A promotion to the rank of Lieut. Colonel has been given **Carl D. Siegel**, M.D., Sedalia, Division Surgeon, 35th Infantry Division, Mo.-Kan. National Guard. Dr. Siegel expresses the need for more physicians and dentists in the Guard.

Announcing a scientifical in cigarette smoking.

KENT with the exclusive "MICRONITE" FILTER

DOCTORS have long been aware of the need for a really effective filter-tipped cigarette. P. Lorillard Company has been conscious of this problem, and after years of study, experiment and research believes it has developed a cigarette that meets the need.

It is the new KENT cigarette with the "Micronite"* Filter. Recent tests have shown that the Micronite Filter *approaches 7 times the efficiency of other filters in the removal of tars and nicotine* and is virtually twice as effective as the next most efficient cigarette.

All members of the medical profession will be interested in the facts about this new cigarette. To avoid possible confusion or misunderstanding by the general public, the details of the KENT studies given on these pages are for physicians only and will not appear in KENT advertising or promotion to the general public.

Micronite as a cigarette filter...

The new filter material—called Micronite—stems directly from the improved protective filters developed to meet critical air-purification problems in atomic energy plants.

When investigations showed that this filter medium was capable of removing all of the minute particles from a stream of cigarette smoke, the filter was modified for use in KENT cigarettes. *This was done in such a way as to permit the passage of pleasant aromatic smoke constituents, but with a removal of the more objectionable fractions of tobacco smoke to an extent never before accomplished.*

Efficacy of the Micronite Filter

The normal human subjects used in testing the Micronite Filter were divided into two categories—*susceptible and non-susceptible*—on the basis of their subjective reactions to cigarette smoking. Approximately two-thirds of the subjects *in this investigation* were *non-susceptible* while the remaining third were definitel *susceptible.* Other investigations have reported a som what similar ratio. (a)

To study the effects of this filter on physiologic reactions to cigarette smoke, in both *susceptible a non-susceptible persons,* two different tests were er ployed, both being measurements of peripheral blo flow.

The first test involves the drop in skin temperatu occurring at the finger tip, induced by smoking a measured according to *well-established procedures.* (b,

The second test is a measurement of vasoconstricti in the hand, as recorded plethysmographically. (d)

The results of these measurements—determined f Lorillard by an independent research organization are shown on the four charts reproduced here. Co currently, other outside independent laboratories a carrying on further research on the chemical and ph iological effects of cigarette smoking *with new and or inal testing methods.*

From these charts, the following general conclusio may be drawn:

When cigarette smoke is drawn through a Micron Filter, it is no longer capable of producing charact istic changes in peripheral blood flow in either *si ceptible or non-susceptible persons.*

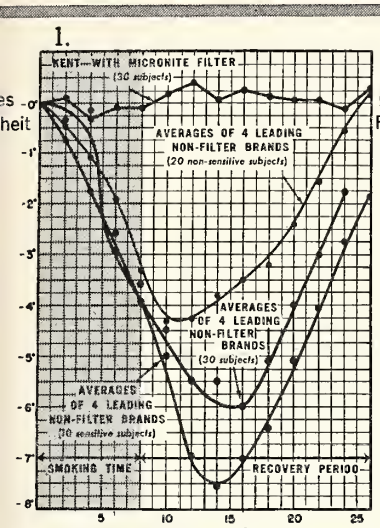
The Micronite Filter is vastly superior to *any oth available filter now in use* for removing tars a nicotine in cigarette smoke.

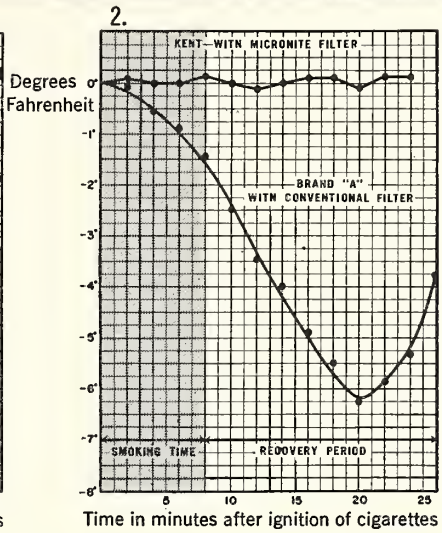
*PATENT APPLIED

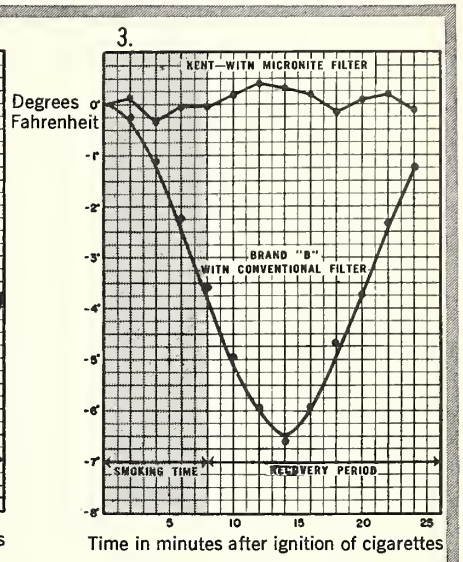
PHYSICIANS:

Today, KENTs are sold in most major U. S. cities If your city is not yet among them, simply writ to P. Lorillard Company, 119 West 40th Street New York, N. Y., and special arrangements wil be made to assure you of a regular supply.

ignificant development





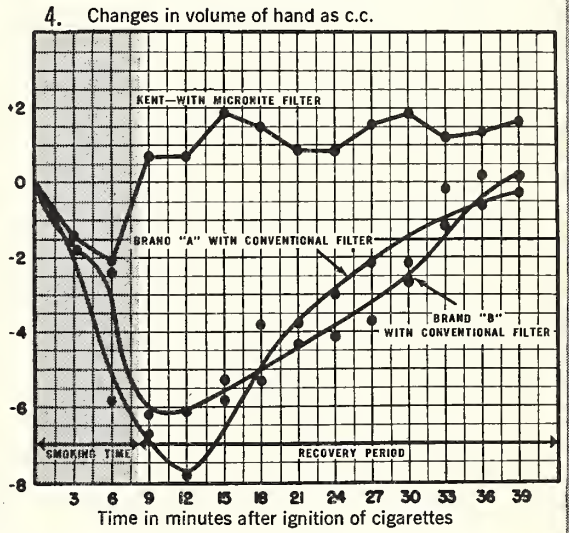


T 1. Comparison of KENT with leading non-filter brands. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette.

T 2. Comparison of KENT with Brand "A" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

T 3. Comparison of KENT with Brand "B" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

T 4. Comparison of KENT with Brand "A" and "B" conventional filter tip. Peripheral vasoconstriction induced by smoking one cigarette. Peripheral blood flow as measured by continuous plethysmography on the hand. Average for 4 susceptible and 8 non-susceptible subjects.



ere are additional observations from work now in ogress:

1. When smoke which has passed through a Micro-e Filter contacts the conjunctival sac of the rabbit, less irritation occurs than when the sac is exposed the smoke from regular cigarettes or the smoke from pular filter-tipped brands.

2. Current studies also indicate that Micronite-fil-ed smoke is less irritating to mucous membranes an unfiltered smoke.

When the scientific evidence of the effectiveness of Micronite Filter is compared *with* the effectiveness other filters, *it shows that*—

The problem of smoker susceptibility to tobacco irritants may be largely overcome by KENTs. And for those people whose smoking should be restricted for therapeutic reasons, *KENTs should be considered* as the cigarette of choice.

P. Lorillard Company will gladly send you a booklet, prepared especially for the medical profession, which describes more fully the investigational work on the chemical and physiological advantages of the new Micronite-filtered KENT cigarette.

References Cited

a. *A Manual of Pharmacology*, 7th Edition, Philadelphia. W. B. Saunders Co., 1949, pp. 341-352.
b. *J.A.M.A.*, Vol. 103, 1934, p. 318.
c. *J.A.M.A.*, Vol. 135, 1947, p. 417.
d. *J.A.M.A.*, Vol. 104, 1935, p. 1963.

IN MEMORIAM

Sasaki, George R., M.D., St. Charles, a graduate of Marquette University School of Medicine, Milwaukee, 1936; member of the St. Charles County Medical Society; aged 48; died February 21.

Prichard, Joseph A., M.D., Overland, a graduate of Marion-Sims College of Medicine, 1891; honor member and former president of the St. Louis County Medical Society; aged 87; died February 25.

Emery, Edgar V., M.D., St. Louis, a graduate of the University of Toronto, 1911; member of the St. Louis Medical Society; aged 64; died March 8.

Seelig, Major G., M.D., Atherton, California, a graduate of Columbia University College of Physicians and Surgeons, New York, 1900; honor member of the St. Louis Medical Society; aged 79; died March 11.

Wilbur, Herbert L., M.D., Joplin, a graduate of the University Medical College of Kansas City, 1908; honor member and former president of the Jasper County Medical Society; aged 77; died March 11.

Denny, Chester H., M.D., Creve Coeur, a graduate of Washington University School of Medicine, 1927; member of the St. Louis County Medical Society; aged 51; died March 21.

Murphy, John Patrick, Jr., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1928; member of the St. Louis Medical Society; aged 52; died March 26.

Goldwasser, Herbert V., M.D., St. Louis, a graduate of Washington University School of Medicine, 1929; member of the St. Louis Medical Society; aged 46; died March 29.

Heinrichs, Julius C., M.D., St. Louis, a graduate of Washington University School of Medicine, 1899; honor member of the St. Louis Medical Society; aged 77.

NEW MEMBERS

Carter, Howard, M.D., Browning
Doane, William L., M.D., Kansas City
Edmondson, Charles T., M.D., Malden
Gibson, David M., M.D., Kansas City
Gootee, Thomas H., M.D., St. Louis
Grayson, Richard R., M.D., Perryville
Kadel, Merle A., M.D., Brookfield
Lyle, Robert R., M.D., Versailles
O'Leary, James L., M.D., St. Louis
O'Malley, James F., M.D., Kansas City
Parato, John M., M.D., St. Louis
Poggemeier, William H., Jr., M.D., St. Charles
Quintana, Manuel M., M.D., Perryville
Schwartz, Alfred J. C., M.D., Washington
Utterman, William F., M.D., Perryville
Walker, Willard B., M.D., St. Louis
Yost, Paul W., M.D., St. Louis

Councilor District News

Clay County Medical Society

The Clay County Medical Society met in regular session with the Auxiliary on Tuesday, March 31, at the Colonial Hotel in Liberty. Dinner was served to both the Society members and their wives.

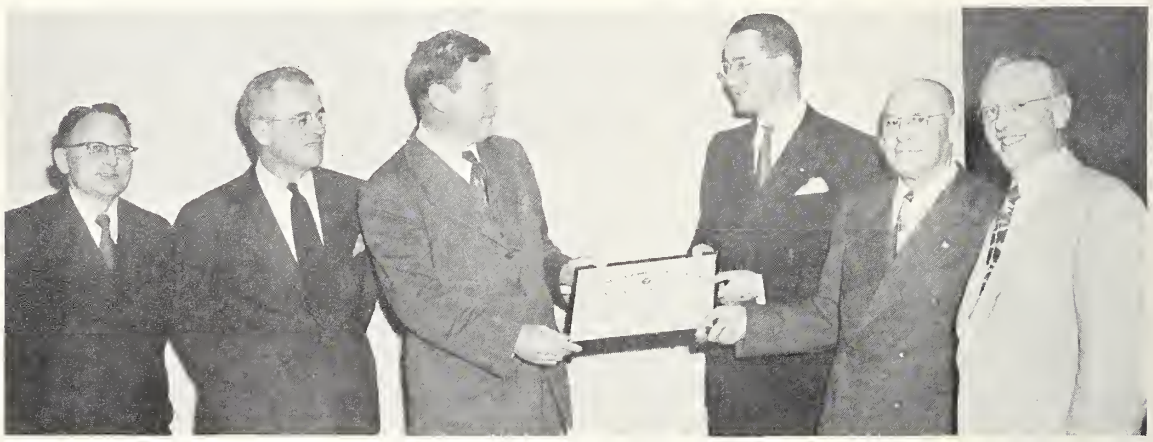
After dinner, the Auxiliary adjourned to another place for their meeting. The Society held a business session and then Drs. Edward Fischer, North Kansas City, and Walter L. Washburn, Gashland, presented Otis E. James, Jr., M.D., Kansas City, who spoke on "Fractures Seen in General Practice and Their Management."

Twenty-two physicians and their wives attended.

The April meeting was postponed because of conflicting dates with the Missouri State Medical Association meeting to be held in Kansas City. The next meeting will be on Tuesday, May 26.

S. R. McCRACKEN, M.D., *Secretary.*

Grand River Medical Society Receives Charter



The Grand River Medical Society received its charter on March 12 at a dinner meeting in Chillicothe. The Society is composed of nine counties. Left to right are John Platz, M. D., Carrollton, Vice President; William Fuson, M.D., Trenton, Past President; J. William Thompson, M.D., St. Louis, President of the Missouri State Medical Association; V. D. Vandiver, M.D., Chillicothe, President of the Society, who accepted the charter for the Society from Dr. Thompson; E. A. Duffy, M.D., Trenton, Secretary, and Donald M. Dowell, M.D., Chillicothe, Councilor of the First Councilor District.

Chariton-Macon-Monroe-Randolph County Medical Society

C. Barber Mueller, M.D., Washington University School of Medicine, St. Louis, spoke at the meeting of the Chariton-Macon-Monroe-Randolph County Medical Society at Moberly on Thursday night, March 12. His subject was "Electrolyte and Water Imbalance."

C. C. Cohrs, M.D., *Secretary*

Vernon-Cedar County Medical Society

A meeting of the Vernon-Cedar County Medical Society was held at the Nevada City Hospital, Thursday night, April 2.

Drs. Carter Luter and Wm. H. Ellett of the Bates County Medical Society, Dr. O. B. Barger of the Cass County Society and Mr. Ray McIntyre, Field Secretary. Missouri State Medical Association, were guests. The main purpose of this meeting was to discuss the possibility of hyphenating Bates, Cass, St. Clair and Vernon-Cedar into one society. All of those present were in favor of such a hyphenation. The societies represented agreed to inform their Councilor of the official action of their respective societies as to the hyphenation so that the matter may be brought before the State Association Council.

F. L. Martin, M.D., *Secretary*

Phelps-Crawford-Dent-Pulaski County Medical Society

The Phelps-Crawford-Dent-Pulaski County Medical Society was host to the dentists of the four counties at a dinner meeting in Rolla on Thursday night, March 26. The wives of both groups adorned the affair with their presence.

Edmund A. Smolik, M.D., Assistant Professor of Clinical Surgery, St. Louis University Medical School, and E. J. Hempstead, D.D.S., Dental Surgeon of St. Louis, presented a most interesting and instructive paper on "Trigeminal Neuralgia and Temporomandibular Joint Dysfunction."

Forty-five people attended this gala affair.

M. K. Underwood, M.D., *Secretary*

Medical Movie

Good public relations package: movie short "Your Doctor," concludes with the statement that: "In the lives of men and women who practice the art and science of medicine is realized the noblest of human aspirations. For long ago it was said that in no other act does man approach so near the gods as when he is restoring the sick to the blessings of health."

Encourage your local theater to show this film, available in St. Louis from Swank Motion Pictures, Inc., 612 N. Skinker Blvd., and in Kansas City from Sight & Sound Co., 320 East 13 St.

Pettis County Holds Doctors' Day

The Woman's Auxiliary to the Pettis County Society sponsored a "Doctors' Day" on Monday, March 30, in Sedalia.

Considerable publicity was gained through the *Sedalia Democrat,* spot announcements over KDOR and from posters displayed in many downtown store windows. The day started with each member of the Bothwell Hospital Staff receiving a red carnation boutonniere to be worn through the day. The day was climaxed with a banquet at the Sedalia Country Club for the Doctors and the members of the Auxiliary with an appropriate program.

About fifty doctors and auxiliary members were present for the evening festivities.

Civil Service Openings

The United States Civil Service Commission has positions in various specialized fields of medicine, salaries from $5,940 to $10,800, principally in the Bureau of Indian Affairs.

Applicants must be fully qualified as doctors of medicine, must be currently licensed to practice medicine and surgery in a state or territory of the United States. Appropriate experience is required.

Further information and application forms may be obtained from the U. S. Civil Service Commission, Washington 25, D. C. Applications will be accepted until further notice by the Board of U. S. Civil Service Examiners, Bureau of Indian Affairs, Department of the Interior, Washington 25, D. C.

City Hospital Alumni Will Meet

The St. Louis City Hospital No. 1 Alumni Association will hold its annual dinner meeting at the Starlight Roof, Chase Hotel, St. Louis, on May 20, 1953. A full evening of entertainment has been arranged. A social hour at 6:30 p.m. will precede the dinner at 7:30 p.m. Those desiring to attend are asked to contact Don C. Weir, M.D., Secretary, 634 North Grand Avenue, St. Louis.

Your Patients Read

"Amoebic Dysentery," *Good Housekeeping,* March.

"They Fight for the Health of Kids They'll Never See," *Parents Magazine,* March.

"The Serum That Checks Measles," *Your Life,* March.

"A New Man," *Brief,* March.

"Lifesaving Drugs Can Harm You," *Ladies' Home Journal,* January.

"Bee Stings Cured My Arthritis," *Pageant,* March.

"Miracles Your Glands Perform," *Woman's Life,* Spring.

"Meeting the Strain of Everyday Living," *Esquire,* March.

"Are You Anemic?" *Life and Health,* March.

"Your Youngster's Eyes," *Ladies' Home Journal,* March.

"The Battle Against Age," *Cosmopolitan,* March.

"Can Your Doctor Make You Sick?" *Parade,* February 15.

"World's Best Doctor," *Reader's Digest,* April.

"The Truth About Germ Warfare in Korea," *Readers Digest,* April.

"What Teen-Agers Want to Know About Sex and Marriage," *Reader's Digest,* April.

"When Life Hangs on a Thread," *Reader's Digest,* April.

PROOF WITH ONE PUFF?

So distinct is the difference between PHILIP MORRIS and *any* other leading brand, that we believe you will notice it with a single puff. Won't you try this simple test, Doctor, and see?

Take a PHILIP MORRIS and any other cigarette

1. Light up either one first. Take a puff—get a good mouthful of smoke—and s-l-o-w-l-y let the smoke come directly through your nose.
2. Now, do exactly the same thing with the other cigarette.

You will notice a distinct difference between PHILIP MORRIS and any other leading brand.

PHILIP MORRIS

Philip Morris & Co., Ltd., Inc., 100 Park Avenue, New York 17, N. Y.

Mrs. Skinner Receives Medal

Mrs. Edward H. Skinner, Kansas City, received the Gold Medal of the American College of Radiology on behalf of the late Dr. Edward H. Skinner from Dr.

John S. Bouslog, Denver, President of the American College of Radiology, on the evening of February 6, 1953, in Chicago. Dr. Skinner was the ninth Gold Medalist in a thirty year period. The medal is inscribed "To Edward H. Skinner, M.D., F.A.C.R., for distinguished and extraordinary service to the American College of Radiology and to the profession for which it stands. Presented by the Board of Chancellors, 1953."

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

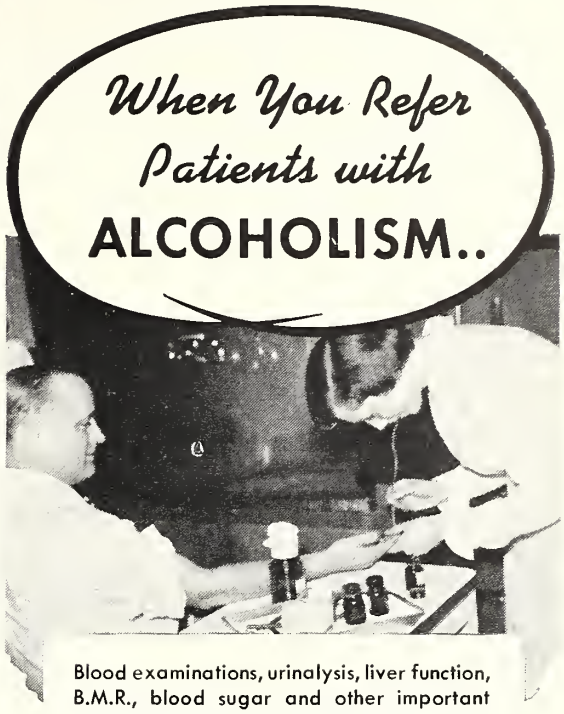
KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."



Blood examinations, urinalysis, liver function, B.M.R., blood sugar and other important diagnostic tests are performed in a modern, well-equipped laboratory.

Years of experience in the specialized care of alcoholic addiction enable The Keeley Institute to embody the following phases of therapeutic approach—gradual withdrawal, physical rehabilitation, re-orientation an re-education.

Soon after admission the patient is given a thorough physical examination and laboratory studies. His nutritional status—highly important in alcoholism—is thoroughly investigated. Pertinent information regarding physical and psychosomatic disorders is obtained and related to each successive examination.

All patients receive the utmost consideration from our staff of full-time physicians. Restraining methods and avulsive reactors are not employed. The referring physician is constantly informed of the patient's progress.

Member, American Hospital Association
Member, Illinois Hospital Association
The Keeley Institute is accredited by the Council on Medical Education and Hospitals of the A.M.A.

Complete information, including rates, will be furnished to physicians on request.

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS

...specify

ABBOTT'S

new Oral Anti-biotic

Especially effective against gram-positive organisms resistant to other antibiotics.

Low toxicity; reported side effects infrequent.

Special "high-blood-level" coating.
ERYTHROCIN, *0.1-Gm. (100-mg.) Tablets, bottle of 25.*

ERYTHROCIN

TRADE MARK

(Erythromycin, Abbott)

INDICATIONS Pharyngitis, tonsillitis, scarlet fever, erysipelas, pneumococcic pneumonia, osteomyelitis, pyoderma. *Also other infections caused by organisms* susceptible to its action, including staphylococci, streptococci and pneumococci.

DOSAGE Total daily dose of 0.8 to 2 Gm., depending on severity of the infection. A total daily dose of 0.6 Gm. is often adequate in the treatment of pneumococcic pneumonia. *For the average adult* the initial dose is 0.2 Gm. to be followed by doses of 0.1 or 0.2 Gm. followed by doses in the same range every four to six hours. *For severely ill patients* doses up to 0.5 Gm. may be repeated at six-hour intervals if necessary. Satisfactory clinical response should appear in 24 to 48 hours if the causative organism is susceptible to ERYTHROCIN. Continue for 48 hours after temperature returns to normal.

Abbott

1. McGuire et al. (1952), J. Antibiotics & Chemo., 2:281, June.
2. Heilman et al. (1952), Proc. Staff Meet. Mayo Clin., 27:385, July 16.
3. Haight and Finland (1952), New Eng. J. Med., 247:227, Aug. 14.

1-139

G. P.—St. Louis Meeting

"Yes, sir, we put out about 100 cases a day; the joint is sure jumpin'," said the Coca-Cola man. . . . Don't know how the new owners of the Cards made out with their dispensing of fluids, but the G.P.'s and their guests sure crowded around the Coke stands. . . . Even saw a known K.C. teetotaler coming out of the cocktail *soiree*, but colleagues insist he never indulged. . . . Robins, of Arkansas, much in prominence, buzzing from one conflab to next: "A lot of the old Cincinnati spirit here, best meeting we've ever had." . . . He oughta know, so prominent in "medical politics" for many years; meant in appreciative, not derogatory, sense.

Personal poll of exhibitors' reaction: "Tremendous! They seem to have plenty of time; in a buying spirit," healthy, good. . . . Too often at meetings, not enough time to really "do" the exhibits. . . . Reasons? Deliberate planning, adequate timing, concentration of activities, more homogeneous group with more diverse equipment and drug needs. . . . No matter the whys and wherefores, the G.P.'s put on a show much appreciated by exhibitors; state and other groups with similar fracases should take notice, follow suit. . . .

First day registration topped total Atlantic City; biggest group in five previous annuals. . . . Around 3,500 M.D.'s, close to 6,000 total registration. . . . Speaks well of St. Louis, this a return engagement of '50. . . . Local arrangements committee, headed by Martin (St. Louis), rate orchids; smooth, efficient, one minor bobble: Split from Jefferson to Statler to Kiel Auditorium, not so red-hot. . . . No Modocs elected to Big Time, the locals notably stay-aways. . . .

Ladies not forgotten, "Fashion" and rubber-neck safari featured . . . efficient Miss Cobb of Exec Office, ubiquitous Cahal and others all everywhere at once, pushing, pulling, keeping the wheels up to tempo. . . .

Can't name all Modocs seen, remember especially Shaw (Fayette), Chairman of M and R Award Committee; Thompson (St. Louis), President of Missouri State, Casebolt (Kansas City), and others putting the bite on the boys for a "C" (Building Fund Committee), and many others saluted. . . . Top-flight scientific speakers, good crowds at each session, well integrated program. . . .

Sell-out banquet, with Leonard Read as speaker, wowed 'em as usual. Topic: freedom in reverse, "Growing Belief in Compulsion.". . . Some of his quotes, "If medicine goes into government, you can depend on it, government will be going into medicine." And another, "Basic idea in socialism is that society has a first lien on the life and livelihood of any citizen for anything it wants." And still another, "If society wants it, it has the right to command your life—it isn't yours, they'll tell you, and that's the socialistic idea!"

This Read is really terrific, as President of the American Foundation for Economic Education, he heads a nonprofit organization doing a unique, laudable service; deserves support of all Americans.

With around 17,000 on the rolls of A.A.G.P. they were nearly 500 short this year; boys didn't do their

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

Josef A. Kindwall, M.D.
Carroll W. Osgood, M.D.
William T. Kradwell, M.D.
Benjamin A. Ruskin, M.D.
Lewis Danziger, M.D.
Russell C. Morrison, M.D.
Homer V. Capparell, M.D.
LeRoy E. Bostian, M.D.

G. H. Schroeder, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

For every age group...

this

Broad Spectrum

DIETARY SUPPLEMENT

Regardless of cause or patient age, the need for dietary supplementation frequently arises. Whenever such supplementation is indicated to round out the intake of essential nutrients, a truly broad spectrum supplement—one that supplies notable amounts of all important nutrients—will serve the patient optimally.

Ovaltine in milk, a delicious food drink, has long been widely prescribed for this purpose. As the appended table shows, it supplies substantial amounts of virtually all nutrients known to take part in metabolism, from biologically top-grade proteins, through the gamut of the essential vitamins, to the minerals needed in trace amounts.

Whenever the patient's nutritional state must be improved, Ovaltine deserves the physician's first consideration.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.

Ovaltine

Three Servings of Ovaltine in Milk Recommended for Daily Use Provide the Following Amounts of Nutrients

(Each serving made of ½ oz. of Ovaltine and 8 fl. oz. of whole milk)

MINERALS		VITAMINS	
*CALCIUM	1.12 Gm.	*ASCORBIC ACID	37 mg.
CHLORINE	900 mg.	BIOTIN	0.03 mg.
COBALT	0.006 mg.	CHOLINE	200 mg.
*COPPER	0.7 mg.	FOLIC ACID	0.05 mg.
FLUORINE	3.0 mg.	*NIACIN	6.7 mg.
*IODINE	0.15 mg.	PANTOTHENIC ACID	3.0 mg.
*IRON	12 mg.	PYRIDOXINE	0.6 mg.
MAGNESIUM	120 mg.	*RIBOFLAVIN	2.0 mg.
MANGANESE	0.4 mg.	*THIAMINE	1.2 mg.
*PHOSPHORUS	940 mg.	*VITAMIN A	3200 I.U.
POTASSIUM	1300 mg.	VITAMIN B_{12}	0.005 mg.
SODIUM	560 mg.	*VITAMIN D	420 I.U.
ZINC	2.6 mg.		

*PROTEIN (biologically complete)	32 Gm.
*CARBOHYDRATE	65 Gm.
*LIPIDS	30 Gm.

*Nutrients for which daily dietary allowances are recommended by the National Research Council

ivory-tower work, and were suspended—naughty, naughty! But we applaud the brass-knucks idea, if the organization gets too soft it'll be just another organization—wonder why the A.M.A. didn't do that years ago?

Strong language in evidence as the delegates boiled over Hawley's latest in the public press. . . . Via long distance phone the local press dragged *our* hero, Evarts Graham, into the imbroglio. . . . In fact, the whole business could and should be settled among ourselves, not in the public press; and we lift a phrase, "Fie on both your houses," for the methods employed!

Sorry we can't tag all the Modocs in this quick survey, and give you more details of an excellent meeting held by this growing, dynamic organization. . . . Definitely out of the new-born category, now to be considered a robust youngster able to stand on its own and able to assert itself. . . . Don't know where it's going, but up to now, it seems to be looking up, which is always good. . . . Its call letters A.A.G.P., they say, means All American Good Physicians! . . . Quite an honor for Missouri and St. Louis to have their fifth annual meet, and for K.C. to house their National Headquarters, which they hope to have cooking this time next year.

We salute the boys of A.A.G.P., who put on such an excellent show.

V. T. W.

Low Forceps

ROBERT LAMAR, M.D.

We see where a brief postgraduate course in eye is scheduled for the near future. (This statement makes the paragraph appear timely, and is probably true anyway.) We have often wondered how such a course, unless very brief, could avoid the pitfall of repetition. Sick eyes seem a relatively limited field, and once you've learned the ophthalmologic red herring terminology, well, you've had it. There may be some "Board Man" trade secrets to offset the jewelry store neon eye in the window, but these naturally would be confidential and unmentionable even in a refresher course. This may sound like, and admittedly is, sour grapes to a practicing gynecologist. Compared to GYN, the eye specialists have four times the potential business. You see, everybody has two eyes.

Medical science, pressing ever onward, has recently discovered pigeons to be carriers of histoplasmosis, and that those who shovel pigeon excreta are in great danger of contracting the disease. While such knowledge is of little consequence to pigeons, to pigeon excreta shovelers it is of great import. Increased pay for added risk, higher insurance premiums, added protective measures, a greater respect for pigeons and pigeon fanciers, so to speak, all apply. This new factual pigeon smidgeon on histoplasmosis has upset us somewhat. We had long planned on obtaining the guano concession from the Kansas City and St. Louis Municipal Hospitals. Now we pass this rich scheme along to anyone with a shovel who is willing to face the risk. Why live dangerously?

Catholic Hospital Association Meeting

Rev. John J. Flanagan, S.J., Executive Director, The Catholic Hospital Association of the United States and Canada.

For the first time in its history, The Catholic Hospital Association of the United States and Canada will hold its 38th annual convention in Kansas City May 25 to 28 in the Municipal Auditorium.

The seventeen general and sectional meetings of the Convention will emphasize different aspects of the theme, "The Coordination of the Spiritual and Professional Objectives of the Catholic Hospital."

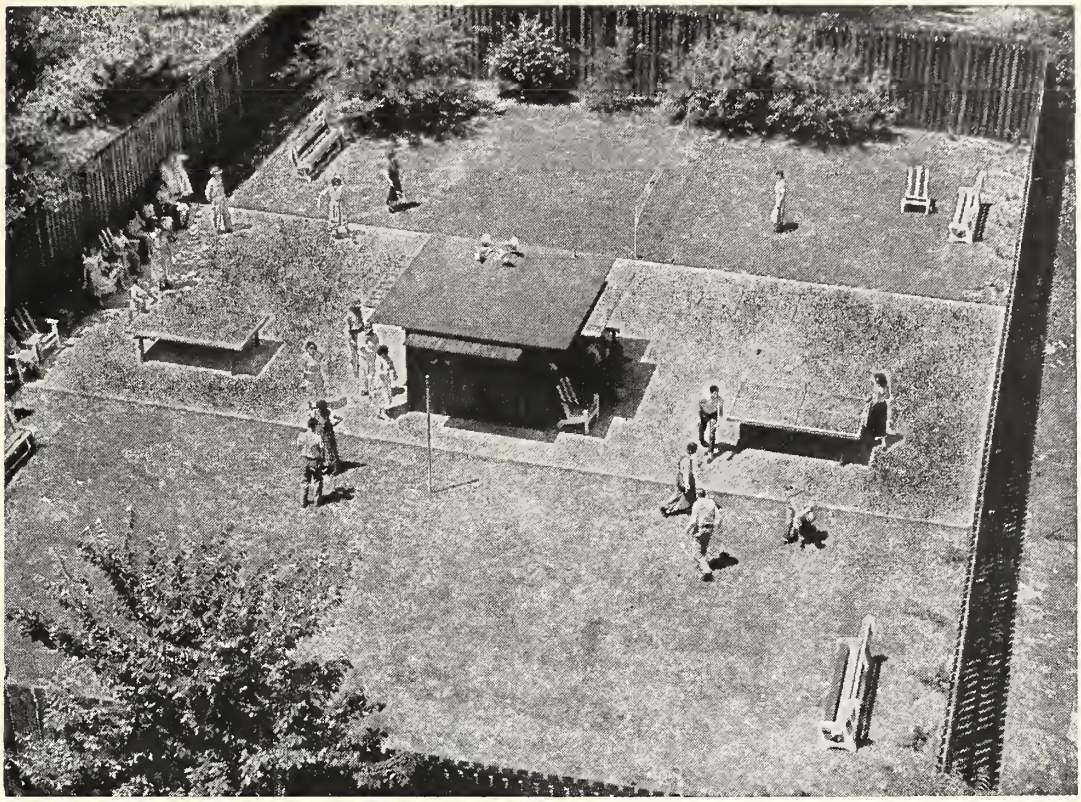
In addition to the Convention, there will be special meetings for associated groups, among them hospital pharmacists, medical technologists, x-ray technicians and medical record librarians.

The Conference of Catholic Schools of Nursing will hold its sixth annual meeting on May 23 to 24, and women's auxiliaries will have a full day meeting May 26.

Others meeting in conjunction with the convention are the Catholic Hospital Conference of Bishops' Representatives, the Hospital Chaplains' Conference and the Conference of Regional Officers of the Association.

In all, some 3,000 religious and lay hospital representatives are expected to attend the various meetings. In addition, they will see some 200 commercial and educational exhibits in the auditorium.

Headquarters of the Association, which has an institutional membership of about 1,400 in this country and Canada, are located in St. Louis. Rev. John J. Flanagan, S.J., is Executive Director, and Mr. M. R. Kneifl is Executive Secretary. Convention headquarters in Kansas City will be in the Hotel President.



Outdoor Recreation Area

In psychiatric therapy recreation is not only "therapy," but play as well. It is important that patients have a chance to get out of their sleeping rooms. The new recreation area at the Neurological Hospital offers almost every patient within a few days after admission, a chance "to get out of the sleeping areas."

Inquiries may be directed to the hospital or to the individual psychiatrist.

Sylvia Allen, M.D.
Edward E. Baumhardt, M.D.
Marvin L. Bills, M.D.
John D. DeMott, M.D.
Merrill T. Eaton, Jr., M.D.
B. Landis Elliott, M.D.
Louis H. Forman, M.D.
Paul Hines, M.D.
Morton Jacobs, M.D.
Milton E. Kirkpatrick, M.D.
Frank J. Koenig. M.D.
Louise B. Loewy, M.D.
Albert Preston, Jr., M.D.
G. Wilse Robinson, M.D.
G. Wilse Robinson, Jr., M.D.
William F. Roth, Jr., M.D.
A. Theodore Steegmann, M.D.
E. H. Trowbridge, Jr., M.D.
James E. Young, M.D.

The Neurological Hospital Association

2625 WEST PASEO
KANSAS CITY 8, MISSOURI

It was with great interest—matched only by the vigor of the detail man—that we learned of the isolation of the laxative principle in prunes. While this world moving ingredient was named Prunout, or some such, by its capitalist subsidized discoverers, and so marketed, we can predict the inevitable sequences with ease. Each and every pharmaceutic company in the near future will erupt with the identical product under different names. And so dozens of medicines from Laxaprune to Prunilax will be added to the cacophony of medical jabberwocky. Although we have long since given up the unequal struggle of trying to follow this repetitive pharmacologic palimpsest, we do occasionally see an intriguing new title. For example, one of the newcomers recently advertised is called "Neo-Penil." We don't know what it is but we're ordering some anyway.

Recently there has been a sudden and voluminous influx of medical students and interns from Australia, India, South Africa and other below-the-belt countries. The varying physical phenomena of the southern hemisphere have always been a source of fascination to one whose passing physics grade was the charitable gesture of an obsolescent professor preparatory to wrapping the draperies of his couch about him. We once were on a ship with a friend who spent the entire night during which the equator was to be crossed repeatedly flushing the toilet to determine at which precise moment the watery swirl would change from clockwise to counterclockwise. Unfortunately, a bottle of gin completely obfuscated his conclusions, but the scientific curiosity was nontheless admirable. We fully expect those from Down Under to make similar medical comparisons. Quite likely there is a hemispheric directionality in testicular torsions, gut malrotations and pedicle twistings.

BOOK REVIEW

BINOCULAR VISION, RESEARCHES IN, by Kenneth N. Ogle, Ph.D., Section on Biophysics and Ciophysical Research; Research Consultant in the Section on Ophthalmology, Mayo Foundation and Mayo Clinic, Rochester, Minnesota. Illustrated. W. B. Saunders Company. Philadelphia and London. 1950. Price $7.50.

This excellent book is well printed and clearly illustrated. The bibliography and well prepared index (too often neglected) are satisfying.

No attempt is made to present the subject for the beginner nor is it a comprehensive coverage of the field of the nonclinical physiology of binocular vision. Rather, as the title states, it collates the individual researches in a single source and then, with a broader perspective, integrates these studies of the famous but now dissolved Dartmouth Eye Institute.

The researches so evaluated, consist first of those on the empirical longitudinal horopter followed by those on the fusional processes (principally sensory).

The third portion of the book discusses the effect of size image differences on binocular vision and the text concludes with considerations of the theoretical and experimental studies on this problem (aniseikonia).

While this book may never put money in a clinician's pocket, it is certainly a storehouse of wealth for his mind and is well worth its cost. R. D. M.

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA
PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899
specialized service assures "know-how"
ST. LOUIS Office:
Robert M. Childers, Rep.,
7004 A Glenmore,
Tel. Evergreen 2950

THE BROWN SCHOOLS
For Exceptional Children
Year-round school, including Summer Camp, for children, tiny tots through teens, with educational and emotional problems. Six separate residence centers, both suburban and ranch, for homogeneous grouping; complete recreational and academic programs. Under the daily supervision of a Certified Psychiatrist. Full time Psychologist and Registered Nurses. Write today for View Book; full details.
BERT P. BROWN
President
PAUL L. WHITE, M.D., F.A.P.A.
Medical Director
P. O. Box 4008-J
AUSTIN, TEXAS

50 *and six*

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

The

RALPH

SANITARIUM

Established 1897

Ralph Emerson Duncan, M.D.
DIRECTOR

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624

New Drugs, New Faces, New Instruments

Mead Johnson Introduces Solution of Pure Fructose for Intravenous Infusion

As the result of extensive research in carbohydrate chemistry, Mead Johnson & Company has successfully developed a method to manufacture pure fructose on a large scale.

Now for the first time available for general clinical use, it is being introduced under the trade name, Levugen. Levugen (fructose, Mead) can be infused twice as rapidly as dextrose with better retention and less disturbance of fluid balance.

Levugen 10 per cent in water is available in 1,000 cc. flasks providing 400 calories.

Mycitracin, Ointment, Is New Product of Upjohn Company

The two antibiotics neomycin and bacitracin complement each other and provide an ointment having a wide range of antibacterial activity against both gram-positive and gram-negative organisms. It is effective against strains which may have become resistant to the antibiotics normally used for systemic infections. Mycitracin is relatively non-irritating and non-toxic to epithelial cells and does not interfere with wound healing. Mycitracin is indicated in the treatment of impetigo, barber's itch, infectious eczematoid dermatitis, infected ulcers, boils and other superficial pyogenic infections of the skin. It is also recommended in the prophylaxis and treatment of secondarily infected burns and wounds.

Parke, Davis & Company, After Many Years of Research, Expects to Make Available Soon A New Anti-Tuberculosis Drug, Viomycin

Parke, Davis & Company has announced that after many years of research it expects to make available to physicians soon a new anti-tuberculosis drug, Viomycin.

Parke-Davis scientists started with a soil sample from Florida in developing Viomycin, an antibiotic. The new drug has proved to be effective in discouraging the growth of "Mycobacterium tuberculosis," the organism which causes tuberculosis. It also has varied and less intense effects on other bacteria, but apparently is not active against the protozoa, fungi, or viruses which cause other diseases.

The company said Viomycin should be administered only under careful supervision of a physician.

Among the many tests conducted with the drug was one involving seventy-two cases of pulmonary tuberculosis at Fitzsimmons Army Hospital, Denver, Colo. Physicians reported "gratifying response in virtually all patients."

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

Others Say

Improving Public Relations

The conviction of many seasoned practitioners is that the best means of improving public relations lies in a more kindly considerate handling of the individual patient. This quality was the hallmark of the doctor of bygone generations, and is an attribute worth cultivating . . . all too many laymen have complained of the lack of a friendly sympathetic explanation from the doctor, of their illness and its implications. The patient may never appreciate a brilliant and very scientific diagnostic triumph, but he is quick to sense and resent a lack of kindly personal interest.—Charles F. Wilson, M.D., *Journal, Cape Girardeau County Medical Society.*

"Workshop for Doctors?"

So you have a peeve against doctors.

Some Carthage citizens say that they have and give that as their reason for opposing the hospital bonds.

A "workshop for doctors" they call the proposed expansion.

It is on us that the doctors would be working.

They will be working on us when we are ill and afflicted wherever we may be.

If it is in an adequate hospital, so much the better for us.

If it is in the overcrowded hospital plant that we now have, so much the worse for us—but no worse for the doctors except that they know that the unpleasant conditions with which we are surrounded may retard our recovery and add mental suffering to our physical pain.

If it is in our own bedroom at home, that would become a workshop for a doctor, too. We do not move our sick into a shed or garage because we did not build our home to be a "workshop for doctors."

The idea of the hospital expansion is to aid the sick and afflicted—not the doctors.

For that matter if you are angry at the moment at doctors the more reason to vote for the hospital expansion.

Physicians indeed do like to work in modern hospitals where adequate facilities for the care of their patients are available.

An expanded hospital is likely to bring more doctors to Carthage.

That would give the current ones about whom you gripe a little more competition.—*Carthage Evening Press.*

We Eat Crow

The issue of whether or not the proposed ordinance (fluoridization of water) is a desirable public health measure is one that should and can be settled on its merits by the Board of Aldermen if they have adequate expert advice. That the question should be settled by the expensive and wholly illogical device of a referendum would only mean that the correct answers to a technical problem would have to be sought by nearly a million citizens instead of by their elected representatives, whose duty it is to inform themselves on such matters.—Willard Bartlett, Jr., M.D., *The Bulletin of the St. Louis Medical Society.*

Advertisement

From where I sit
by Joe Marsh

Chip Pulls a "Pip"

Chip Hanson is a clever commercial artist. Besides doing cartoons on our paper, he picks up "free lance" drawing jobs.

Right now he's whipping up some posters for the Safety Campaign. They all have headlines like "PLAY IT SAFE!" . . . or, "A LIVE WIRE CAN START A FIRE!"

Chip looked a bit sheepish yesterday. Didn't want to tell me why. Finally he blurted out, "I feel like a dope. Here I am on this safety program and the fire inspectors tell me *my own studio's a fire trap.* I've been storing paint there for years . . ."

From where I sit, what happened to Chip could happen to anyone. He was just too busy informing everyone else about safety—not realizing his safety was threatened. Like those who fret about their neighbors—how they should practice their profession, whether they should have coffee or a glass of beer with lunch—Chip simply forgot to "draw" some obvious conclusions about himself!

Joe Marsh

Copyright, 1953, United States Brewers Foundation

North Shore Health Resort

on the shores of Lake Michigan

WINNETKA, ILLINOIS

NERVOUS and MENTAL DISORDERS
ALCOHOLISM and DRUG ADDICTION

Modern Methods of Treatment

MODERATE RATES

Established 1901
Licensed by State of Illinois

Fully Approved by the
American College of Surgeons

SAMUEL LIEBMAN, M.S., M.D.
Medical Director

225 Sheridan Road

WInnetka 6-0211

ACCIDENT, HOSPITAL AND SICKNESS INSURANCE

For Physicians, Surgeons, Dentists Exclusively

$5,000 accidental death Quarterly $8.00 $25 weekly indemnity, accident and sickness	$15,000 accidental death Quarterly $24.00 $75 weekly indemnity, accident and sickness
$10,000 accidental death Quarterly $16.00 $50 weekly indemnity, accident and sickness	$20,000 accidental death Quarterly $32.00 $100 weekly indemnity, accident and sickness

Cost Has Never Exceeded Amounts Shown

ALSO HOSPITAL INSURANCE

	Single	Double	Triple	Quadruple
60 days in Hospital	5.00 per day	10.00 per day	15.00 per day	20.00 per day
30 days of Nurse at Home	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
X-Ray in Hospital	10.00	20.00	30.00	40.00
Medicines in Hospital	10.00	20.00	30.00	40.00
Ambulance to or from Hospital	10.00	20.00	30.00	40.00
COSTS (Quarterly)				
Adult	2.50	5.00	7.50	10.00
Child to age 19	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

$4,000,000.00
INVESTED ASSETS

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

51 years under the same management

$19,500,000.00
PAID FOR CLAIMS

400 First National Bank Building

Omaha 2, Nebraska

$200,000.00 deposited with State of Nebraska for protection of our members

RADIUM & RADIUM D+E

(including Radium Applicators)

For All Medical Purposes

Est. 1919

Quincy X-Ray & Radium Laboratories

(Owned and Directed by a Physician-Radiologist)

HAROLD SWANBERG, B.S., M.D., Director

W. C. U. Bldg., Quincy, Illinois

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.

Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

SECLUSION MATERNITY

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED—Locum Tenens for 2 years beginning July 15 or August 1, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

GENERAL PRACTICE-COMPLETELY EQUIPPED CLINIC. Partner leaving for Army. Prefer draft exempt G.P. under 35, qualified for general surgery. Volume and remuneration practically unlimited. Excellent hospital facilities. Missouri. Terms open. Full details in first letter. Box 185, Journal of Missouri State Medical Association, 634 N. Grand Ave., St. Louis 3, Mo.

FOR SALE—Ear, Nose and Throat practice established in 1937 and has been continuous till now. This is a city of at least 75,000 population. Due to illness I am quitting practice. Will sell equipment and give possession in a few days. Address inquiries to George A. Griot, M.D., 1640 East Sunshine Drive, Springfield, Mo.

SITUATION WANTED: General Practitioner; age 29; Family; Category IV; completing rotating internship June, 1953; Desire association with G.P. or group. Write Box 186, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

INDEX TO ADVERTISERS

Abbott Laboratories 327, 376-377
American Meat Institute 324
Ames Company 360
Ar-Ex Cosmetics 384
Ayerst, McKenna & Harrison, Ltd. 355

Bayer Company 329
Brown Schools 382
Blue Cross-Blue Shield 363

Coca-Cola Company 325
Cook County Graduate School 390
Cordelia of Hollywood 387

Duncan Laboratories 359

Fairmount Hospital 389

Hamilton-Schmidt Surgical Co. 384

W. E. Isle Company 375

Katz Drug Company 388
Keeley Institute 375
Kent Cigarettes 370-371

Lederle Laboratories ..... Insert
Eli Lilly & Company 338
Luzier's, Inc. 348

Mead Johnson & Company 392
Medical Protective Company 382
Merck & Company 356
Milwaukee Sanitarium 378

Neurological Hospital Association 381
Norbury Sanitarium 389
North Shore Health Resort 386

O'Connell Bros., Inc. 389

Parke, Davis & Company 322-323
Chas. Pfizer & Co. 391
Philip Morris & Co. 374
Physicians Casualty Association 386

Quincy X-Ray and Radium Labs. 389

Ralph Sanitarium 383

Schering Corp. 333
G. D. Searle & Co. 347

U. S. Brewers Foundation, Inc. 385
Upjohn Company 281

Wander Company 379
West Texas Maternity Hospital 384
Winthrop-Stearns, Inc. 335
Dorothy Worrell 390
Wyeth, Inc. 337

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Cook County Graduate School of Medicine

Postgraduate Courses—1953

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting May 11, June 1, June 15
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting June 1
Surgical Anatomy & Clinical Surgery, Two Weeks, starting June 15, August 17
Gallbladder Surgery, Ten Hours, starting June 29
Surgery of Colon & Rectum, One Week, starting May 11
General Surgery, Two Weeks, October 12
Thoracic Surgery, One Week, starting June 8
Breast & Thyroid Surgery, One Week, starting June 22
Esophageal Surgery, One Week, starting June 22
Fractures & Traumatic Surgery, Two Weeks, starting June 15

GYNECOLOGY—Intensive Course, Two Weeks, starting June 15
Vaginal Approach to Pelvic Surgery, One Week, starting June 8

OBSTETRICS—Intensive Course, Two Weeks, starting June 8

PEDIATRICS—Congenital Heart Disease, Two Weeks, starting May 18
Cerebral Palsy, Two Weeks, starting June 15

MEDICINE—Gastroenterology, Two Weeks, starting May 18
Electrocardiography & Heart Disease, Two Weeks, starting July 13
Allergy, One Month and Six Months, by appointment

CYSTOSCOPY—Ten-Day Practical Course starting every two weeks

DERMATOLOGY—Intensive Course, Two Weeks, starting May 11

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Curiosa et Trivia

William B. McCunniff, M.D.

Georges Clemenceau, history making Frenchman, was the son of a physician, studied medicine n Nantes and Paris, was graduated in 1865, after vhich he came to the United States. Here he vorked as an anonymous correspondent for the Paris *Temps,* taught French in a Connecticut chool, was married and divorced. In 1870 returned o Paris where he began practice. He is credited vith a deathbed request that he be buried upright ecause "even in death I wish to remain standing."

Hypnosis by monotony? In 1951 Nevada and New Mexico had approximately twice the traffic leath rate of Missouri.

December 28, 1898 *Christian Herald* would indicate little need for physicians: "Dyspepsia is soon cured . . . by Hood's Sarsaparilla," "Vapo-Cresolene cures while you sleep . . . whooping cough, croup, asthma," "Spectacles at wholesale . . . send or catalog," "Varicose veins . . . often cured by our patented elastic stockings," "The improved elastic truss . . . will effect a permanent and speedy cure," "Constipation, cancer, rheumatism, and all blood diseases cured by . . . extract of Red Clover Blossoms," "Rheumatism cured . . . by Tartarlithine . . . distributed by McKesson & Robbins."

And dentists may have been superfluous: "Fill your own Teeth . . . with Dr. Truman's (?) Crystaline . . . lasts a lifetime."

Pliny the Elder (23-79 A. D.) used animal bladders as respirators against noxious dusts.

Virus is a Latin word meaning slime . . . a poisonous liquid. In Latin it has no plural; in English it is "viruses," not "viri." But for a singular subject, a large consumer—requiring about 14 million eggs per year for virus culture.

Research Clinic

107 West Linwood Boulevard **Jefferson 5353** **Kansas City 2, Missouri**

- **Fifty physicians representing all specialties**
- **Every modern diagnostic laboratory aid**
- **All reports returned to referring physician**
- **Moderate fees for complete diagnostic survey**

Physicians invited to visit or write for information

WARREN F. WILHELM, M.D. **MEDICAL DIRECTOR**

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. ceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 01-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per ar. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

Missouri's Rural Health Program

CHESTER E. STARR, *Director, Missouri Rural Health Service*

Missouri, over the last ten years, has been steadily moving toward higher standards of health in all rural areas. This rise in standards and levels has been accomplished by many agencies and persons, some of whom are "unsung and forgotten." A short survey might be of advantage to many in the health field—a sort of "viewing the forest rather than our own particular trees."

The supply of general practitioners is still short in many rural areas. The Missouri State Medical Association has been responsible for many young doctors locating in rural towns. The actual number so locating is larger than is generally known. The supply of dentists is also short, although not quite as much so as physicians. One of the most critical needs is for more nurses—for general hospital duty, for rural hospital supervision and for public health work. The stimulation of the Federal Hill-Burton funds has aided in securing a rather good coverage of the rural areas with general hospitals. The Missouri Advisory Hospital Commission reports that about 80 per cent of rural hospital needs are now filled, and with the completion of the present approved projects about 90 per cent of general hospital facilities will be met. Only two areas are left in Missouri which need new general hospitals.

The preventive medicine part of the advance in standards is also moving along. An ambitious project now underway is the "Indigent Study" to determine facts concerning Missouri's indigents and to form a base for planning a state program to remedy this great need. The Missouri Health Council is bending all efforts to encourage county councils to really survey their area needs and to perfect and carry out plans for remedy. The new County Health Unit act is being used by increasing numbers of counties to form permanent health education institutions. The Missouri Division of Health has transformed itself from a "policing organization" to one leading the way toward preventive health. Lack of personnel is one serious crippling factor in both the county health centers and the State Division.

In both the curative field and preventive medicine, the voluntary agencies like the Polio Foundation, Cancer Society, Tuberculosis Association and the Crippled Children Association have beer active and are pulling their part of the load.

Those of us who have been working in the "health vineyard" are able to report more anc more yield of satisfaction, pride and feeling of ac complishment as we look back over the ten yea span. Missouri has achieved a good team in bette health for Missouri citizens. The team seems to b hitched up to keep going without kicking over th traces or holding back on the hills.

Of This and That

MARK M. MARKS, M.D.

This is the age of the atom. At last man has achieved his dream of harnessing the power of matter to serve his purposes. The destructive effects of this unleashed fury we have witnessed on the desert, at sea and in the holocausts of Nagasaki and Hiroshima. The potential of this force for good even more intrigues the searching mind.

When did this notion first find expression in the written word of man? Democritus, a Greek philosopher born in 460 B. C., set forth the following hypothesis about the properties of atoms:

1. "They are infinite in number, qualitatively absolutely identical and distinct only by shape and size. The differences we perceive in things a based upon the difference and shape of th atoms, but above all, upon a change in the pos tion of its atoms.

2. "Motion is a primitive property of atom Like atoms themselves, it is eternal and inco ruptible. Hence, the atoms are ceaselessly motion that can be changed by pressure and pe cussion." (Grote: History of Greek Philosophy

Twenty-four hundred years ago this mode miracle was set forth . . . the only thing th Democritus failed to comprehend is that mat and energy are one. It took all that time to find t again.

You'd see a good-sized gallery

. . . with all the patients who represent the 44 uses for short-acting

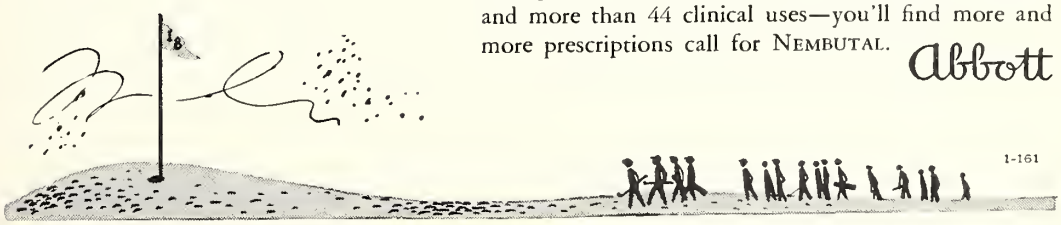
Nembutal®

WHAT YARDSTICK DO YOU USE TO DETERMINE the drug you write on your prescription? If the drug is a barbiturate—such as short-acting NEMBUTAL (Pentobarbital, Abbott)—you can measure it, compare it and sum it up in these four short sentences:

1. *Short-acting* NEMBUTAL *can produce any desired degree of cerebral depression—from mild sedation to deep hypnosis.*
2. *The dosage you need is small—only about half that of many other barbiturates.*
3. *There's less drug to be inactivated, shorter duration of effect, wide margin of safety and usually no morning-after hangover.*
4. *In equal oral doses, no other barbiturate combines quicker, briefer, more profound effect.*

Perhaps that's why—after 23 years, 598 published reports and more than 44 clinical uses—you'll find more and more prescriptions call for NEMBUTAL.

Abbott



1-161

With Our G. P.'s

William J. Shaw, M.D.

General practitioners in Missouri, the best meeting attenders to be found, are reluctant to pass the recent fifth annual scientific session of the American Academy of General Practice without a few remarks, statistics or observations.

William J. Shaw, M.D.

Dr. Charles E. Martin, St. Louis, local arrangements committee chairman, ably assisted by Chairmen Preston C. Hall, Charles O. Metz, Norton J. Eversoll, and Mrs. N. J. Eversoll, with their committee members, deserve accolades from the entire Assembly for outstanding performance.

Missouri proudly and logically registered 454 doctors at the meeting. Including wives, students, technical and scientific exhibitors, the total state registration was about 900. Kenneth Glover, president of the Missouri Academy of General Practice, and Charles Martin gave excellent welcoming addresses at the opening session. Many other Missouri general practitioners were active in the Assembly deliberations. Dr. P. V. Siegel, Missouri Academy secretary, arranged a luncheon meeting for officers of that body that was excellently attended.

No better résumé of this meeting of the American Academy of General Practice can be written than that given by Dr. Howard Rusk after the first annual session in Cincinnati four years ago when the Academy had less than 5,000 members. After addressing that group Dr. Rusk wrote in the *New York Times,* "It was heartening to attend the initial meeting of the American Academy of General Practice; heartening because of the high caliber of the men present. It made one feel good to know that the primary responsibility of medical care in this country is in their hands. The tempered judgment of their deliberations, that recognized both the abilities and the limitations of the physicians doing general practice, made evident the breadth of concept of this group. The eagerness with which they sought medical truth presages a bright future for medical progress."

It is regretted that Dr. Rusk could not have been present in St. Louis this year to observe the degree of maturity this fledgling organization has reached in four years.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

Shore was good to visit with you down in St. Louis. Too bad you couldn't have come a little sooner and stayed longer. I really felt bad when that catfish dinner you ordered fizzled out. Fact is I felt so bad about it I came right home and went fishing. You know the willer buds are just popping out and they make awful good catfish bait. We have a good sized mess in the freezer any time you want to come down. I'll even have 'em rolled in corn meal for you.

Seems like about every day I read something about the doctor draft law and if I don't see something about it I hear talking about it. Guess maybe I ain't right smart but some of the things I see and hear just don't make sense.

For instance, I had a letter from the Missouri Physicians and Dentists Veterans Association the other day which among other things tried to put the bite on me for five bucks. They were talking about doctors being unsuitable for military service because of their lack of adaptability. I got a big laugh out of that. There might be a weaker excuse for trying to get out of serving one's country but for the life of me I can't think of one. If a man can adapt himself enough to get through medical school and subscribes to the Oath there can't be any question about adaptability for military service.

Another thing that beats me is the essential physician. There just ain't no such thing, even if he is the only man in a rural area. I happen to know. I found out just how essential I was. Maybe a desirable convenience but never an essential one. Didn't notice the death rate jumping up either the year I was gone. Your patients get taken care of. Fact is some of my former best patients are still being taken care of eighteen months later.

It's a shame we don't have Sir William here now to set some of the boys straight. High time we all cultivated such a measure of equanimity toward our patriotic duty that would allow us to meet it with the courage befitting a man.

Reckon I had best go dig out my blues seein' as how I've been writing some admirals concernin' promotion of reserve officers. I might end up with a third hitch!

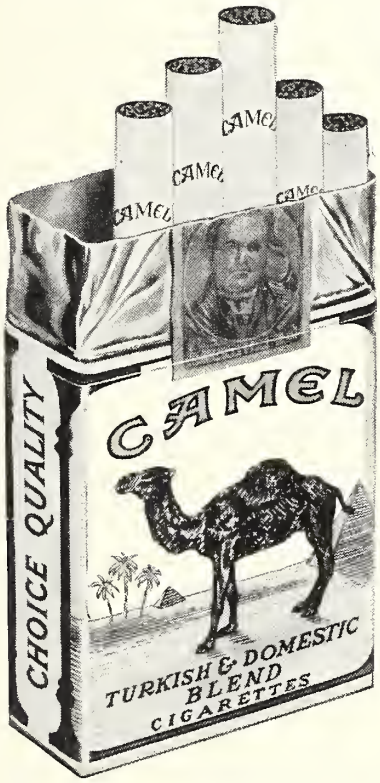
Your non-essential nephew,
Pete

P. S. Have to scrape some green off them two gold stripes. No one would ever believe I've been a full bull that long.

Mild

Cool

Flavorful



There must
be a reason why...

More people smoke

Camels

than any other
cigarette!

Our Auxiliary

Mrs. C. Alex (Helen) McBurney, *President*

The Woman's Auxiliary to the A.M.A. was organized in St. Louis thirty-one years ago. There were twenty-four women present, representing nine states; today, there are 60,000 members.

Mrs. Willard Bartlett, St. Louis, was one of the organizers. A few years ago she wrote a history of the Woman's Auxiliary to the American Medical Association during its first twelve years. In 1941, the national auxiliary made her an honorary member.

Missouri has been honored by having two national presidents, Mrs. George H. Hoxie, Kansas City, and Mrs. A. B. McGlothlan, St. Joseph.

In 1931, the A.M.A. made its first request of the Woman's Auxiliary, that we stimulate the sale of *Hygeia,* now *Today's Health.*

In 1945, our members were asked to study the pending legislation, of which the Wagner, Murray, Dingell Bill was a part.

In 1949, the auxiliaries were asked to take active participation in the American Medical Education Campaign, to help educate the public on the policies of the A.M.A. All auxiliaries had strong public relations programs and began a planned program of health education, filling the needs of each community.

In 1952, the A.M.A. asked for our cooperation in "Get-Out-the-Vote Drive," which we did, with the same enthusiasm as "Whitaker and Baxter."

Attention—Missouri Physicians: In hyphenated county medical societies, where no auxiliary exists, your help is needed to stimulate interest in organizing auxiliaries. An auxiliary works in the interest of the medical profession and stimulates better public relations in your community. At your next district councilor meeting, ask your wives to join you for dinner. Include your state auxiliary president and first vice president (chairman of organization), who will be glad to explain to the group the policies of the auxiliary and to assist in organizing an auxiliary.

We need your help to keep American Medicine free!

Capsule Clinics

Irving A. Wien, M.D.

• Chemical studies in the elderly patient indicate a rather high incidence of avitaminosis. Their diet should be high in protein, vitamin A, B, and C, calcium, and iron. Salter, W. T.: Geriatrics 7 (November-December) 1952.

• Impaired renal function may slow the excretion of terramycin and penicillin to such a degree that blood levels which are toxic to the patient may ensue. Bateman, J. C.: Arch. Int. Med. 90 (December) 1952.

• The factors contributing to the mortality rate in tubal pregnancy are: failure of diagnosis, delay in surgery, inadequate blood replacement, elective surgery beyond the immediate need, and the patient's delay in seeking care. Priddle, H. D., et al: Am. J. Obst. & Gynec. 64 (November) 1952.

• The basic principles of the therapy of diabetes are: relief of symptoms, maintenance of normal nutrition, preservation of the insulin producing power of the pancreas, and the preservation, postponement or minimization of complications. Ricketts, H. T.: Ann. Int. Med. 37 (December) 1952.

• Renal ptosis as an uncomplicated entity is rarely an indication for surgery. Kaminsky, A. F.: Urol. 69 (January) 1953.

• The operability rate of carcinoma of the esophagus today is 65 per cent, and the surgical mortality rate is 7 per cent. Balfour, D. C.: Bull. A. Col. Surg. 38 (January-February) 1953.

• Penicillin in large doses is a satisfactory therapeutic agent for the average patient with meningococcic meningitis and can be used in lieu of sulfonamides when desired. Lepper, M. H., et al: J. Lab. & Clin. Med. 40 (December) 1952.

• Ten cases of severe pre-eclampsia and eclampsia treated with the use of intravenous Veratrone showed good response with rapid lowering of the hypertension and clearing of the toxemia within twenty-four hours. Alban, E. J., et al: Am. J. Obst. & Gynec. 64 (November) 1952.

• In patients with abortion there is no evidence to support the theory that proper examination stimulates the process of abortion; without examination much time and blood may be lost. Diddle, A. W.: Postgrad. Med. 12 (December) 1952.

• A new method of causing intravascular thrombosis in a varicose vein consists in leaving a length of silk ligature within the lumen of the vein to be thrombosed; complete obliteration of the vein results. Johnson, A. A.: Internat. Surg. Digest 54 (October) 1952.

SUPERMIX liquid chemicals are 6 ways better than powders

Read why 83% of GE's customers have switched to liquids

EVERY PROCESSOR WANTS THESE	HOW SUPERMIX LIQUID CHEMICALS GIVE YOU THESE ADVANTAGES
1 BETTER FILMS	SUPERMIX Developer brings out every bit of contrast, density and detail that are in the film. And, with proper refreshing, it will do it in the same time month after month.
2 MORE FILMS	Using SUPERMIX liquid chemicals, you can process nearly twice the number of films possible with powders in a given time. That means you can handle a much greater film load without interruption.
3 FASTER PROCESSING	Fresh SUPERMIX Developer works in 3 minutes. Fresh SUPERMIX Fixer clears in 45 seconds — films are ready for wet-film viewing in 4 minutes — completely developed and fixed in 5.
4 LESS WORK	No pails, pans, paddles, thermometers or screwdrivers! Just pour SUPERMIX into the tank, add water at working temperature — and you're all set. No overnight wait.
5 EXTREME STABILITY	SUPERMIX Developer, Refresher and Speed Fixer have withstood tests in temperatures as low as 75° below zero . . . as high as 155° F for 30 consecutive days—without damage.
6 LOWER COSTS	The long life and increased output of SUPERMIX liquid chemicals save you money. Using Refresher, you can process 1200 14 x 17's in SUPERMIX for a cost of *only 3.7¢ each!*

Ask your GE x-ray representative for a copy of our informative booklet, "A Look at X-Ray Film Processing," or write:

You can put your confidence in —

GENERAL ELECTRIC

Direct Factory Branches:

KANSAS CITY — 112 West 19th Street **ST. LOUIS — 2010 Olive Street**

What Is Your Hobby, Doctor?

"Flying High"

Aviation is not a unique pastime for professional men, but in the case of D. B. Elrod, M.D., and family, it has almost become a passion. For many years the Elrods have combined this chief hobby with other diversions such as hunting and fishing, so that "I am able to go farther at less expense, enjoy better hunting and fishing, and still not have

a good case of driving jitters either when I get to my destination or arrive back home."

The Elrods are "100 per cent sold on flying." Mrs. Elrod, Burk (the oldest son), and Dr. Elrod, each hold a private license for flying. Don (aged 14) already has pressed Dad to get going himself.

The only scares or thrills reported, after many air hours, came about getting to the airport, when, on two occasions, they have been "scared to death" by trucks which scored near-misses, fortunately. "If we could eliminate the trip from our home to the airport, then flying would be perfectly safe," concludes Elrod.

Last year, when Dr. and Mrs. Elrod flew their private plane to Anchorage, Alaska, and back, was their greatest flying thrill, avers Elrod. They left Cape Girardeau, June 10, via Minnesota, Winnipeg and Edmonton. "Anyone flying this area must carry a certain amount of 'survival equipment,' such as a ten day supply of dehydrated foods, gun, tent, medicine, fishing tackle, etc." From Edmonton, they flew to Grand Prairie, Dawson Creek, and picked up the beginning of the Alaskan Highway.

Elrod reports this highway well traveled (800 to 1,000 cars each day), and overnight accommodations for flyers are excellent. A light plane can land almost any place along the highway if forced down, and certainly within thirty minutes a car would be along to give help. A snow storm between Fort Nelson and Watson Lake kept the Elrods "grounded" two and a half days. Otherwise, they report a completely uneventful trip. About every fifty to seventy-five miles is a fine emergency-strip, lighted, with shelter, and telephone communications.

Along the Yukon River, the White Horse Rapids (over country beautiful and unchanged for the last 500 years) they flew, into Alaska. At Anchorage, the Elrods were joined by Bud Branaham, a top notch guide for ten days of "the finest trout fishing that can be found anywhere."

Leaving Anchorage on July 5, the flight home took only three days. The flying time—round trip—was fifty-nine hours for the 8,000 miles, consuming 775 gallons of gas, with a gross expenditure for travel of less than $300.00. Thus, the voyagers "saw lots of country, with more time to spend in the most desired spots, at about half the cost of going by car."

Dr. Elrod is an expert hunter as well, stating that he is a "dyed-in-the-wool goose and duck hunter, and none better can be found anyhere in the States," as he invites fellow-physicians to Cape Girardeau. From the accompanying photograph, it is obvious that Elrod gets more than ducks. This is a 1,200 pound Brownie killed on the Alaskan Peninsula in 1951.

(We would appreciate ideas about others of our members with unusual hobbies.—V. T. W.)

How Do You Treat Detail Men?

Contrary to the opinion of a few, detail men can be a great help in the practice of medicine. They bring news of recent discoveries and information on drugs, new and old, which we have not seen in the literature.

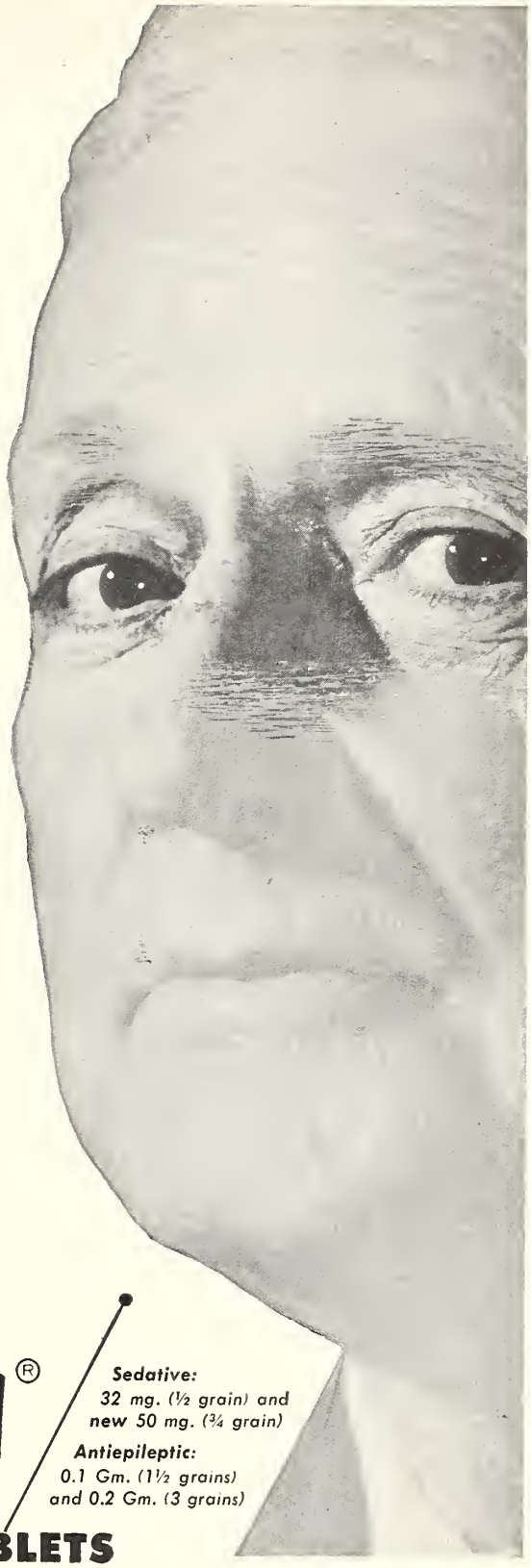
True, sometimes they have a prearranged speech prepared, which is boring or, on the other hand, they may come unprepared to impart knowledge which is useful; however, they will at least bring up the names of a few products, and this reminder, together with the literature they leave behind, may, on frequent occasion, be extremely vital.

It is my practice to store all of the literature that is presented in a large letter file. Then when a case is seen that calls for a new medicine, or one with which I am not acquainted, I go through the literature and see if there is a drug on the market that would benefit my patient. . . .

It is almost impossible for me to see detail men at the beginning of hours, whereas frequently I can work them in toward the end of the day. Most of them stop by and look at the appointment sheet and ask for an appointment not taken. If the appointment schedule is full they will ask to be sandwiched in toward the end of the day. This they soon learn and appreciate.

Most certainly, all detail men wish to cooperate with the doctor. That is their business. It probably would be wise if more doctors would cooperate with them.—O. S. Jones, M.D., *St. L. G.P., News and Views.*

Relaxed but awake



In emotional and nervous disorders, Mebaral exerts its calming influence without excessive hypnotic action.

Mebaral is also a reliable anticonvulsant.

INDICATIONS:

Because of its high degree of sedative effectiveness, Mebaral finds a great field of usefulness in the regulation of agitated, depressed or anxiety states, as well as in convulsive disturbances. Specific disorders in which the calming influence of Mebaral is indicated include neuroses, mild psychoses, nervous symptoms of the menopause, hypertension, hyperthyroidism and epilepsy.

for sedation

Mebaral®

Tasteless **TABLETS**

Sedative:
32 mg. (½ grain) and new 50 mg. (¾ grain)

Antiepileptic:
0.1 Gm. (1½ grains) and 0.2 Gm. (3 grains)

WINTHROP-STEARNS INC. New York 18, N.Y., Windsor, Ont.

Mebaral, trademark reg. U. S. & Canada, brand of mephobarbital

Division of Health

Missouri Plan for the Distribution and Use of Gamma Globulin for Prevention of Poliomyelitis

Adopted May 5, 1953
(For information of physicians)

James R. Amos, M.D., *Division Director*

Field studies conducted in 1951 and 1952 by Hammon and associates (J.A.M.A., April 11, 1953) demonstrated that gamma globulin (GG) is temporarily effective in reducing the incidence of paralytic poliomyelitis in children who are given approximately 0.14 cc. per pound body weight. Wide publicity has been given to the results and it is anticipated that demands for GG will far exceed the limited supply. There are about 38,000,000 children in the nation ages 1 through 14 and about 1,000,000 doses of GG. For this reason, virtually all GG in the nation has been placed under the control of the Office of Defense Mobilization for allocation to state health departments. The Office of Defense Mobilization has made recommendations for the most effective and equitable distribution and use of the available GG supply within the states, and the Missouri plan is largely based upon these recommendations.

The essentials of the plan adopted by the Missouri Division of Health are as follows:

1. *Persons Eligible to Receive GG.*—Household contacts of a clinically diagnosed and reported case of poliomyelitis who are under 31 years of age, or who are pregnant at any age, are eligible to receive GG from their physician. Household contacts are persons living together as a family unit. This category of people has been chosen to receive GG because it promises to be the most effective and equitable means of utilization of the limited doses available. Multiple clinical cases of poliomyelitis in a single family are thought to be infrequent, but secondary attack rates in families, based on second cases occurring 7 days or more after the initial case, have been 10 times the rate in the general population (New York State, 1950).

2. *Distribution Centers.*—In order to make GG as immediately available as possible to physicians throughout Missouri, it will be stocked by city, county and district public health offices. To avoid administrative confusion, the Division of Health Central Office in Jefferson City will not supply it directly to practicing physicians.

3. *How Secured by Physicians.*—To secure GG, a physician must report (by phone, card, messenger, mail or telegram) a clinically diagnosed case of poliomyelitis according to regulations and submit the names and ages of household contacts eligible to receive GG. This is important because our quota of GG will depend upon the number of cases of poliomyelitis reported. The official report and the names and ages of contacts must be on record in the local health office as substantiating evidence of the GG dispensed. It is important that poliomyelitis be reported as paralytic (including bulbar) or nonparalytic. The location of a physician's office rather than the residence of contacts will determine from what local health office a physician will receive GG. When a physician requests GG for nonresidents, however, he should assure himself that another physician has not requested a supply for the same people. A request form may be secured from the local health office for use by physicians in requesting GG. This same form will be used by the local health office as its record of GG dispensed (form GG-1).

4. *How Used by Physicians.*—The recommended dosage (as used by Hammon) is 0.14 cc. per pound body weight. The suggested maximum dose is 20 cc. There is close correlation between age and weight so, as a matter of convenience, physicians are asked to indicate the age of contacts rather than weight. GG for poliomyelitis prophylaxis will be packaged in 10 cc. vials and it will frequently be necessary to issue the physician an amount in excess of the requirements for a particular household.

5. *General Considerations.*—The success of this method of using GG depends entirely upon the cooperativeness and assistance of practicing physicians. There is no simple easy answer to the problem. We must do the best we can with the limited materials and facilities available. Local public health personnel have been requested to facilitate, in every way possible within the necessary restrictions, the distribution of GG to physicians. Physicians can be helpful by familiarizing themselves with the plan, by supplying the necessary information at the time they request GG, and by diagnosing poliomyelitis on the same basis that they have in the past.

Perhaps physicians can accomplish most by impressing upon the public the limitations of GG. The vast majority of children and adults are immune to clinical infection with poliomyelitis and therefore will not benefit from GG even when given under the most favorable circumstances. In Hammon's studies it required 1,000 doses of GG to prevent 1.6 cases of poliomyelitis. Applying this effectiveness rate, and assuming 7,000 doses will eventually be available in Missouri (twice the basic allotment), 11 cases would be prevented in 1953. On the other hand, the same number of doses given to household contacts would theoretically prevent 19 cases. It should be kept in mind that these data apply to epidemic situations. Effectiveness rates, particularly those for mass community prophylaxis, would be much lower in areas where poliomyelitis was not occuring in epidemic form. It should be emphasized that GG affords only relative passive immunity for a few weeks. With the dosage recommended, the span of effectiveness is about 8 weeks. In Hammon's report there were 26 cases of paralytic poliomyelitis during this period among 27,500 children receiving GG and 68 cases in a control (gelatin) group of about the same size. It would appear, therefore, that 38 per cent of the 68 children expected to have poliomyelitis without benefit of GG were infected even though they received GG.

cortisone + SCHERING = Cortogen

the symbol SCHERING denotes leadership in steroid hormone research and manufacture -- including Cortogen in the most useful clinical forms.

For systemic therapy, use Cortogen tablets SCHERING or injection.

For eye disorders use Cortogen ophthalmic suspension -- sterile. The Schering seal SCHERING appears on each tablet and package -- your assurance of quality.

CORTOGEN®

Acetate (cortisone acetate, Schering) Tablets, 5 mg. and 25 mg.;
Injection, 25 mg. per cc., 10 cc. multiple-dose vials;
Ophthalmic Suspension—*Sterile*, 0.5% and 2.5%, 5 cc. dropper bottles.

Schering CORPORATION · BLOOMFIELD, NEW JERSEY
In Canada: Schering Corporation, Ltd., Montreal.

CORTOGEN

SCHERING

President's Message

The matter of obtaining consent to perform an autopsy in our state has been a rather troublesome problem. Senate Bill 237 was introduced by Senators John W. Noble and R. Jasper Smith to provide a logical method of obtaining consent for an autopsy from surviving relatives. This bill was passed by the Legislature and was approved by Governor Donnelly on May 7, 1953. The law will take effect ninety days after the adjournment of the Legislature.

The thanks of the profession are due to the sponsors and the other members of the General Assembly for their help in solving this problem.

Eldon de Bohrer

The Differentiation Between the Elective and The Emergency Case

Paul Johnstone, M.D., Kansas City

The differentiation between the elective and the emergency case is a medical matter which at times requires much medical training. And failure to properly manage a true medical emergency could prove disastrous, indeed.

As the result of shorter working hours for hospital personnel, an improvement which the Missouri State Medical Association has favored, the differentiation between the emergency and the elective case has been brought more sharply into focus. For example, emergency problems over the weekend become more formidable to the hospital institution with staff restriction at this time.

Because of the manifold nature of the differentiation between the elective and the emergency case it is not possible to make an inclusive list of the factors which constitute an emergency admission for the guidance of non-medical personnel in Missouri hospital institutions.

On March 8, 1953, the Council of the Missouri State Medical Association resolved that the differentiation between the elective and the emergency case must be made on the basis of each individual case; that this determination can be made only by the physician in charge of the case; and that the physician in charge of the case should be held responsible by the hospital medical staff.

The resolution as detailed provides a channel which affords full protection to the people of Missouri when they lie sick and helpless in the hospital institutions of Missouri. Acceptable medical talent, which they have selected, makes this important medical decision for them; as should be. And the boards of directors and boards of trustees of hospital institutions of Missouri can require the hospital medical staffs to check these decisions of medical staff members, from time to time.

The hospital medical staff has held individual members of the staff responsible in many medical matters for a long time. Indeed, no other unit in the hospital organization could function in this regard. The differentiation between the elective and the emergency case is merely another of the medical matters which only the hospital medical staff can properly check.

At the last meeting of the Joint Conference for the Improvement of the Care of the Patient of Missouri, the Missouri State Nurses Association and the Missouri State Hospital Association were informed of the above detailed action of the Council of the Missouri State Medical Association.

Chairman, Committee on Hospital and Professional Relations of the Missouri State Medical Association.

Long-Term "L.O.D."

The *Denver Post,* of Dec. 4, 1952, while the AMA was currently meeting in Denver, in its leading editorial captioned "Speaking of Taxes," stated that in 1951, 84.6 per cent of all patients discharged from VA hospitals were non-service connected cases. ". . . The VA hospital and medical service which is now costing taxpayers about $600 million a year is not being conducted primarily to take care of war "victims." The AMA committee does not believe that a civilian whose leg is broken in an automobile accident is entitled to have it fixed at federal expense merely because he was a G. I. at some time in the past.

"With the AMA committee view, most Americans will heartily agree, we believe.

". . . No time should be lost in cutting down the free patient load of the VA and in ending a scandalous expense that taxpayers cannot afford."

Marguerite Shepard (in *St. Louis Globe-Democrat*) "A $7,000,000 neuropsychiatric addition to Veterans Hospital at Jefferson Barracks, completed last November . . . is nearly empty and idle because the VA is unable to get enough doctors and nurses to staff it. . . . Hospital personnel director, Leo M. Duncan, observed that the government (although VA pays nurses more than nearly any other type of institution) has no money to pay for advertising to get them.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 June, 1953 Number 6

AMNIOTIC FLUID PULMONARY EMBOLISM

A REPORT OF TWO CASES AND REVIEW OF LITERATURE

J. C. BACALA, M.D.
ST. LOUIS

THE INFREQUENCY of amniotic fluid pulmonary embolism is evident in current medical literature.[2, 21] However, its increasing appearance, although sporadic, claims more recognition, behooving every physician to report its occurrence when it arises.

This is a report of two cases from the files of the Obstetrical Department of St. Anthony's Hospital, St. Louis, in a ten year (1942-1952) survey involving 26,322 deliveries. The first case is definitely confirmed by histologic demonstration of amniotic fluid particulates in the pulmonary vessels, while the second case, not confirmed by the slides of the lungs for amniotic fluid constituents, has been diagnostically based upon the gross findings on autopsy of visible emboli in the bifurcation of the pulmonary artery and the extravasation of amniotic fluid in the left pelvic floor adjacent to an area of uterine softening (rupture?).

CASE REPORT

Case 1. T. D., a 35 year old para 5 married housewife who entered the institution first on July 5, 1951, due to irregular bleeding at about full term pregnancy. After eight hours no further evidence of labor was noted. She was sent home, to come back at 11:00 a.m. on July 18. Her pains were at 5 to 8 minute intervals since 5:00 o'clock that morning. The cervix showed only 2½ cm. dilatation. After fifteen minutes, demerol 100 mg. was given intramuscularly and, soon after, the membranes ruptured. A dark fluid oozed from the vagina. She expelled yellowish vomitus. Then, suddenly, at 11:20 a.m., she became cyanotic and stiff. She was hurried to the delivery table. No pulse was perceptible. Meanwhile, the fetal head was found quite low. By low forceps, a live normal infant was born weighing 3,120 gm.

Maternal care consisted of adrenaline intracardiac, artificial respiration, oxygen intubation—all to no avail. She expired at 11:30 that morning.

Her past history was normal and irrelevant except for a conization of the cervix prior to this present gestation.

Pathologist's Report (Dr. B. C. Portuondo).—Autopsy was performed two hours postmortem with the following significant findings: The pericardial cavity was somewhat enlarged to the right, and the right auricle was considerably distended. Through the intact wall of the auricle, three ovoid grayish masses were noted which, when removed and flattened, were thought to be greasy. The peritoneal cavity showed some 100 cc. of yellowish fluid limited to the left inferior lateral aspect; and the tissues in the immediate vicinity showed considerable increase in fluid, and some areas which apparently contained "bubbles" of air. Some hemorrhagic discoloration was present in these areas as well. The enlarged uterus had a rupture about 5 cm. long in the left inferior side. A normal placenta was present.

Histologic examination of the lung shows basophilic staining irregular acellular masses in the small arteries and arterioles. In some areas, polyhedral cells were well recognizable.

Comment: This multiparous woman had five previous normal and easy deliveries. The unusual thing noted was the cervical dilatation of 2½ cm. just a few minutes before the catastrophe. One can conjecture that at this instant, the previous cervical conization may have caused a scarring, hence the firm cervix. Perhaps by a forceful contraction, a sudden give away caused a tear, giving entrance of the amniotic fluid into the circulation.

One certain thing, however, was the diagnosis. The clinical picture of a previously normal patient suddenly turning critical demanded an impression of amniotic fluid pulmonary embolism. This was confirmed in the autopsy by the findings of amniotis fluid extravasation and by the histologic finding of polyhedral cells and acellular basophilic staining masses which mean amniotic fluid particulates (squamous epithelia, mucin, vernix caseosa).

CASE REPORT

Case 2. A. S., a 41 year old para 7 white housewife, was admitted at 6:45 p.m. on July 9, 1951, at full term,

Department of Obstetrics and Gynecology and Department of Biochemistry, Faculty of Medicine, University of Santo Tomas, Manila, Philippines (on leave) and Medical Director, St. Anthony's Hospital, St. Louis, Mo.

After this paper was ready, another report of Amniotic Fluid Embolism by Cron, Kilkenny, Wertweim and Evrard was published in the Am. J. Obst. & Gynec. December 1952.

TABLE 1. TABULATION OF REPORTED CASES

Year Reported Case No.	Maternal			Fetal			Findings		Remarks
	Age	Parity	Gestation in weeks	Weight	Delivery	Condition	Gross	Microscopic	
1941									
1[1]	30	2	38	....	Spont.	Stillborn	Negative	Amniotic Fld. Particulates	Violent pains, shock
2	26	1	42	3510	Undel.	Stillborn	Pulm. Edema	"	"Powerful labor," left heart failure
3	28	4	40	4086	Spont.	Living	Pulm. Edema	"	Hard short labor, Postpartum Hemorrhage
4	37	3	40	4604	Spont.	Stillborn	Visible Uterine Emboli	"	Severe labor, Abruptio Placenta; Postpartum Herorrhage
5	42	7	..	....	Spont.	Living	Pulm. Edema	"	Severe labor. Thyrotocosis, Plac. Praevia
6	34	2	48	5180	Craniotomy	Stillborn	Pulm. Cong.	"	Postpartum Hemorrhage Sepsis
7	33	3	40	5568	Spont.	Living	Pulm. Cong.	"	Powerful labor, Eclampsoid; Diabetes Mellitus
8	25	2	40	3629	Undel.	Stillborn	Ruptured Uterus	"	Severe labor, Prolapsed Cord; Pitocin induced
1942									
9[3]	35	1	..	....	Low Forceps	Stillborn	Ruptured Uterus	"	Abdominal pain sharp; convulsion
10	38	2	..	....	Cesarean Section	Living	Pulm. Edema	"	Hypertensive; total Placenta Praevia
1946									
11[4]									Cited by Gross & Benz
1947									
12[5]	33	2	42	3500	Spont.	Stillborn	"Mottled Lungs"	Positive	Previous cervical laceration induced by castor oil
13[6]	40	6	40	....	Spont.	Stillborn	Pulm. Edema & Infarct	Positive	Cord around the neck
14[4]	25	2	43	....	Version & Extr'n	Stillborn	Negative	Positive	Last previous pregnancy 8 years ago
15	42	3	39	....	Low Forceps	Stillborn	Echymosis, Bd. Lig. Fld. Abdomen	Empty Pulm. Vessels; No Squamae	Hydramnios, Tetanoid contraction; Pitocin induced; last pregnancy 20 years ago
16	35	5	36	....	Spont.	Living	Thrombotic Bd. Lig. Veins	Positive	Bloody Amniotic fluid, last pregnancy 3 years ago
17[8]	18	0	43	3360	Breeech, Forceps	Living			Nonfatal
1948									
18[9]	30	0	40	2735	Undel.	Stillborn	Uterine Tears Cervix Abr'n	Positive	Cyanosis, Dyspnea after patient climbed stretcher
19[10]	28	0	28	Premat.	Cesarean Section	Living 24 hours	Atonic Uterus	Positive	Marginal Placentation, Hemorrhage, much
20[11]	25	2	40½	3409	Undel.	Stillborn	Ragged Tear Rt. S, Uterus	Cells Resemble Heart Failure	Last pregnancy 3 years ago; face presentation
21[12]									Not reviewed
22[13]	32	3	44	4190	Cesarean Section	Neonatal Death	Negative	Positive	Placenta Praevia
23	31	0	..	....	Low Forceps	Living	Ruptured Uterus; Retro-periton. Hematoma	Positive	Pitocin-induced; postpartum hemorrhage
1949									
24[14]	44	3	40	3863	Undel.	Stillborn	Pulm. Edema, Greasy Flecks in Vessels	Positive	Hydramnios, Pitocin-induced, very strong contractions
25[15]	44	3	40	3320	Undel.	Stillborn	Negative	Positive	Cyanosis and convulsion
1950									
26[16]	37	3	40	3272	Spont.	Stillborn	Negative	Positive	Cyanosis and shock
27	36	3	40	....	Undel.	Stillborn	Negative	Positive	Cyanosis and shock
28[17]	29	3	40	2900	Spont.	Stillborn	Ruptured Uterus; Retro-perit. Hematoma	Positive	Postpartum hemorrhage, Pitocin-induced; anaphylactic shock
29	33	6	40	....	Spont.	Living	Negative	Positive	Pitocin-induced, postpartum hemorrhage
20[18]	27	1	38	....	Spont.	Stillborn	Pulm. Edema	Positive	Severe contraction; cord around neck; last pregnancy 11 years ago
31[19]	40	2	40	3373	Postmortem Midforceps	Living	Petechiae Heart	Positive	Twitching and Cyanosis; Quinine-induced
32[20]	28	1	41	3288	Postmortem Cesarean	Neonatal Death	Negative	Positive	Sudden cyanosis and collapse, not in labor
33[21]	38	2	..	4500	Undel.	Stillborn	Uterine Tear	Positive	Severe chest pain; last pregnancy 6 years ago
34	39	3	..	....	Spont.	Well, 12 hours	Negative	Positive	Pitocin-induced
35	31	8	..	4108	Spont. Precipitous	Living	Cervix, lacerated; Bloody Amniot. Fluid	Positive	Severe labor pains; toxema
36[22]	23	0	41	....	Mod. Scanzoni's; Spinal Anes	Stillborn	Placental Tears	Positive	Quinine-induced; cervix very thick; R.O.P.
37[23]	30	4	..	....	Repeat Section	Stillborn	Hematoma, Bd. Lig. Rt. Ut. Thrombosis; Hemoperitoneum	Positive	Persistent Transverse; postpartum hemorrhage
1951									
38[24]	33	6	..	3232	Postmortem Sec.	Died, 48 hours	Uterine Tears, Bd. Lig. Edema	Positive	Pitocin-induced; sharp abdominal pains
39[25]	28	3	40	3702	Low Forceps	Stillborn	Pulm. Edema	Positive	Cyanosis, vomiting; rales
40[26]	39	3	41	3695	Low Forceps	Stillborn	Retroperit. Hematoma	Positive	Cord around neck
41[27]	27	0	42½	....	Cesarean	Stillborn	Retroperit. Hematoma	Positive	Premature Placent. separation; hemorrhage
1952									
42[28]	24	0	41	4139	Midforceps	Living			Nonfatal
43[29]									Nonfatal
44[30]	30	0	42½	4090	Low Forceps Spinal anes.	Living	Uterine Tear Bd. Lig. Extrav.	Positive	Castor-oil induced
45	35	5	43	3120	Low Forceps	Living	Uterine Tear	Positive	Previous conization: Pitocin-induced: bleeding

after spontaneous rupture of the membranes at home one half hour before admission. She had one finger cervical dilatation. Considerable distention and bluish discoloration of labial varicosities were noted. Nembutal and Demerol were given. At about midnight, she was prepared for delivery. Infundin minims ii were given hypodermically at 12:15 a.m. and later at 12:45 a.m. At 1:10 a.m. delivery was attempted under low forceps. When traction was applied, the blades of the forceps slipped off the head. Bleeding followed. Vaginal packing was inserted.

The patient was returned to the labor room and observed. At 2:00 a.m., pulse rate was 120. Morphine sulphate ¼ gr. was given. Uterine contractions were repeated at three minute intervals. One half liter of blood was given on the delivery table. At 4:30 a.m. infundin was given. Packing was removed and the head was found low. Only little bleeding was noted. At 4:45 a.m. pitocin was given. Soon after, the patient became restless and dyspneic. Pulse became weak and later imperceptible. Skin was cold and clammy, respirations were gasping. Oxygen was administered. Exodus occurred at 5:30 a.m.; fetus undelivered.

Pathologist's Report (Dr. B. C. Portuondo).—The autopsy was performed three hours postmortem and the following significant findings were noted: There was a slight distention of the pericardium and of the right auricle. At the bifurcation of the pulmonary artery, a small dull mass was found partially occluding the lumen. The peritoneal cavity (left pelvic floor) contained about 150 cc. of yellowish fluid, adjacent to the left inferior aspect of the uterus. A full term fetus was present in utero. The uterus showed some softening in the left inferior area.

Histologic examination of the lung fields showed a fairly even admixture of blood elements with some fibrinous bands inside the pulmonary artery.

Comment: The intrapartum shock occurring quite suddenly in the course of an otherwise uneventful labor calls for an impression of amniotic fluid pulmonary embolism. The gross necropsy findings of a dull mass partially occluding the bifurcation of the pulmonary artery, although histologically found to be only an admixture of blood elements and some fibrinous bands, makes one think of amniotic fluid embolus, especially when associated with an amniotic fluid extravasation around the region of what possibly may have been a uterine rent (softening). The clinical aspect considered, makes the diagnosis fit well the criteria for this entity.

DISCUSSION

Amniotic fluid pulmonary embolism was practically unknown in the medical world until Steiner and Lushbaugh reported their first eight cases in 1941.[1] It is, however, a rare entity, May and Winter not finding one single case in 11,000 autopsies in a ten year survey at the Charity Hospital of Louisiana, New Orleans.[2]

Including the present report, forty-six cases of amniotic fluid pulmonary embolism will have been reported: eight cases in 1941,[1] two in 1942,[3] one in 1946,[4] six in 1947,[5-8] six in 1948,[9-13] two in 1949,[14, 15] twelve in 1950,[16-23] four in 1951,[24-27] and three in 1952.[28-30] The addition of these present cases totals forty-six in all (see table).

In a previously asymptomatic patient in labor, a sudden twist occurs. Cyanosis, dyspnea, cold clammy skin, vomiting, convulsion, restlessness, sudden sharp pains or profound shock strikes the attention for this aspect of a fast sinking patient. This usually happens in a multiparous patient (thirty cases) although eight of these cases reported were nulliparous and five primipara. Three have not been accounted for.

Many of these cases have been rendered "suddenly dystocic" due to relatively strong or tetanoid contractions (ten cases) or due to induction by pitocin (eight cases), quinine (two cases), castor oil (two cases); also in cases with either actual or relatively large fetuses, many times with overdue gestation ranging from forty-one to forty-eight weeks. Six of the cases had a prolonged interval from their last deliveries, ranging from three, six or up to twenty years, making a practically inelastic, if not scarred, cervix. Two of these cases had previous cervical lacerations and conization, respectively.

Moreover, some obstetric abnormalities enter into the picture. There were eleven cases with hydramnios, three with placenta praevia, one with ablatio placenta and another with toxemia. On the fetal side, one had transverse position, one posterior occipital and another face presentations. Four cord anomalies were noted, three with cord coiled around the neck and one with prolapse of the cord.

The diagnosis is often made from the clinical picture, as noted best in the three nonfatal cases.[8, 28, 29] After death, one supposed pathognomonic test has been suggested by Gross and Benz with the finding of squamae in the third flocculent layer above the leukocytic cream of a tri-stratified blood after centrifuging.[7]

The gross pathologic findings at necropsy involved frequently local findings in the pelvic organs and in the lungs. Twelve of these cases had ruptured uteri, eleven had pulmonary edema, five had edema and hemorrhages in the broad ligament, four had retroperitoneal hematomata and hemorrhages and four had visible evidences of emboli as seen on the surface.

The conditions could be explained in the light of the clinical picture. Uterine rupture, retroperitoneal hematomata and hemorrhages, hemorrhages in the broad ligament and cervical lacerations can be explained by the excessive pressure forcing the often enlarged fetuses through less dilatable cervices, thus causing rents, tears or lacerations. The ensuing shock well explains the existence of pulmonary edema.[33]

Histologic confirmation of the diagnosis lies in the objective finding of amniotic fluid elements in the pulmonary vasculature. Epithelial squamae, meconium, vernix caseosa, mucinous debris and lanugo comprise the extraneous matter found intravascularly.

Some investigators have been intrigued by the

finding of noncoagulable blood in many cases.[7] Recent studies have boiled down to intravascular clotting due to the presence of amniotic fluid which, in turn, defibrinizes the rest of the circulating blood, thus leading to noncoagulability.[27, 29, 32] Nine of these cases showed significant hemorrhagic pictures.

The cause of death has had many theories. Reflex vasospasm was once thought of. Mechanical occlusion and anoxia were prominent beliefs to have been the cause of death. Of cases studied, Mallory, et al, doubts that mechanical occlusion could explain all the deaths so far described in this entity.[21]

The most possible cause of death has been thought to be anaphylaxis. The sudden profound shock fits well in the picture of anaphylaxia. The only doubt that has made others hesitate in its acceptance was the absence of any evidence of primary sensitization to amniotic fluid.

The recent studies of Pierre Rosa have, at last, shown that normally, amniotic fluid passes through the placental barrier, goes into the maternal circulation and, at last, is excreted through the kidneys.[31] His evidence seems incontestable. If this fact could be acceptable, then one can explain the primary sensitization of the mother to amniotic fluid, so that, upon the sudden entrance of amniotic fluid into her blood stream during the catastrophe, anaphylaxia is the rule.

SUMMARY

The presentation of two more cases of amniotic fluid pulmonary embolism, both of whom had gross evidence of uterine tears and amniotic fluid extravasation, is being reported.

Review of forty-four reported cases since Steiner and Lushbaugh first reported their cases in 1941, is herein tabulated.

Summarization of the clinical picture and an attempt to explain the cause of death on anaphylactic reasons has been presented.

Acknowledgement: Gratitude is hereby given to Dr. William C. Stude, Associate Professor in Obstetrics and Gynecology, St. Louis University School of Medicine, and Head, Department of Obstetrics and Gynecology, St. Anthony's Hospital, for the approval and encouragement of this study; to Dr. Buenaventure C. Portuondo, St. Anthony's Pathologist, for the review of all slides concerned and for the pathologic report incorporated; to Dr. Emmet Rund and Dr. Henry Pyne, under whose services, cases T. D. and A. S. respectively, were admitted, for permission to use these cases in this report.

BIBLIOGRAPHY

1. Steiner, P. E., and Lushbaugh, C. C.: J. A. M. A. **117**: 1245-1254 and 1340-1345, 1941.
2. May, H. W., and Winter, F. D.: Surg., Gynec. & Obst. **92**:231, 1951.
3. Lushbaugh, C. C., and Steiner, P. E.: Am. J. Obst. & Gynec. **43**:833-838, 1942.
4. Burt, R. C.: Cited by Gross and Benz, 1946, 1947.
5. Hemmings, Clarence T.: Am. J. Obst. & Gynec. **53**: 303-306, 1947.
6. Goodof, Irving I.: J. Maine M. A. **38**:101-102 (May) 1947.
7. Gross, P., and Benz, E. J.: Surg., Gynec. & Obst. **85**: 315-320, 1947.
8. Seltzer, L. M., and Schuman, Wm.: Am. J. Obst. & Gynec. **54**:1038-1046 (December) 1948.
9. Wyatt, J. P., and Goldenberg, H.: Arch. Path. **45**:366-370 (March) 1948.
10. Jennings, E. R., and Stofer, B. E.: Arch. Path. **45**:616-621 (May) 1948.
11. Watkins, L. E.: Am. J. Obst. & Gynec. **56**:944-996, 1948.
12. Dumont: Gynec. et Obst. **48**:403-405, 1949.
13. Barron, S. S.; Sturley, R. F., and Lindson, D. T.: Minnesota Med. **32**:70, 1949.
14. Shotton, D. M., and Taylor, W.: J. Obst. & Gynec. Brit. Emp. **56**:46, 1949.
15. Steiner, P. E.; Lushbaugh, C. C., and Frank, L.: Am. J. Obst. & Gynec. **58**:802, 1949.
16. Moore, O.: Personal communication cited by Kristner and Graf, 1950.
17. Kristner, R. W.; Graf, Wm., and Johnstone, R. E.: Obst., Gynec. Survey **5**:629-647 (October) 1950.
18. Hoback, Wm.: South. Surg. **16**:281-284 (March) 1950.
19. Newberger, C.: Illinois M. J. **98**:301-303 (November) 1950.
20. Crowder, R. E., and Bills, E. S.: Am. J. Obst. & Gynec. **60**:1388-1389 (December) 1950.
21. Mallory, K.; Blackburn, M.; Sparling, H. I., and Nickerson, D. A.: New England J. Med. **243**:583-587 (October) 1950.
22. Schenken, J. P.; Slaughter, G. P., and DeMay, G. H.: Am. J. Clin. Path. **20**:147-152 (February) 1950.
23. Landing, B. H.: New England J. Med. **243**:590-596 (October) 1950.
24. Bouton, S. M., and Saunders, J.: J. Clin. Path. **21**:566-572 (June) 1951.
25. Marcuse, P. M., and Duson, C. K.; Am. J. Obst. & Gynec. **61**:695, 1951.
26. Finlay, J. M., and Barrie, H. J.: Canad. M. A. J. **64**:210-213 (March) 1951.
27. Weiner, A. E., and Reid, D. E.: New England J. Med. **243**:597-598 (November) 1951.
28. Hager, H. F., and Favies, S.: Am. J. Obst. & Gynec. **63**:901-904 (April) 1952.
29. Smith, Preven B.: Acta Obst. Gynec. Scand. **31**:191-198, 1952.
30. Ratnoff, O. D., and Vasburgh, G.: New England J. Med. **247**:970-973 (Dec. 25) 1952.
31. Rosa, Pierre: Gynec. & Obst. **60**:462, 1951.
32. Weiner, A.; Reid, D. C., and Roby, C. C.: Science **110**:190, 1949.
33. Moon, V. H.: Arch. Path. **24**:795-810, 1937.

Therapeutic Exuberance

Now comes the admonition by Finland and Weinstein that the old timers had, and still have, a healthy point of view, and that the physician still has his first responsibility of not doing more harm than good. Nihilism, as a reasonably sound approach to the care of the sick, has presumably gone forever, but the physician must still study his own limitations, the patients' own role in victory and the risks of the therapy as well as its benefits. The antibiotics are revealed, as the experienced therapist has known them for many years, as agents to be employed when the battle is critical or fraught with risk, but neither a substitute for natural resistance and acquired immunity nor a new invention outmoding the necessity for medical judgment.—Editorial, *New England J. Med.*

Men in general practice are generally regarded to be the keystone of American Medicine. In the American Academy of General Practice they have an organization of which they can be proud. It stands for equality of privileges to all doctors of medicine in proportion to their training, aptitude, and experience. It stands for continued education of its members. It stands for giving better medicine by better trained physicians and surgeons to all of the people in America.—Charles E. Martin, M.D., in *St. Louis County Medical Bulletin,* April 3, 1953.

AN INTRODUCTION FOR PHYSICIANS TO AN IN-PATIENT REHABILITATION SERVICE IN A GENERAL HOSPITAL

OTAKER MACHEK, M.D.
ST. LOUIS

DEVELOPMENT OF THE PROGRAM

REHABILITATION in-patient programs appeared in this country after the second world war, in mental hospitals, convalescent homes for crippled children and in tuberculosis sanitoria. There were two kinds of programs, one stressing more the vocational rehabilitation concentrating on training of clients in trades, the other based on physical medicine utilizing physical therapy, occupational therapy and physical education. Both of them had separate developments. The vocational program was initiated first when the first civilian law became effective in 1920. The physical rehabilitation received an impetus from Dr. H. Kessler and the Air Force program initiated by Dr. Rusk. The rehabilitation centers differ in stressing one or the other aspects or having them well balanced. The Baruch report recognizes the importance of total rehabilitation and provides for separate units in clinical psychology and guidance. Some centers combine it in Psycho-Social and Vocational service.

ROLE OF THE SERVICE

There is no doubt but that the physical restoration as shown in the last war experience speeds up the recovery from surgery. However, it is in the field of chronic illness that rehabilitation becomes more essential and more complex. The social viewpoint of medical and hospital practice and sociologic changes in the society here and abroad are giving increased emphasis to the role of rehabilitation. It is predicted by many that as the technology and understanding of etiologies progress there will be decreasing need for hospitalization for acute diseases with increased demand for care for chronic patients and change in longevity.

OBJECTIVES OF THE PROGRAM

1. Orientation of the patient and the family in order to help them understand the disability. Social assistance in adjusting process.
2. Maximum physical restoration.
3. Opportunity for constructive use of enforced leisure.
4. Assistance with psycho-social problems.
5. Prevocational preparation and referral to appropriate community resources.
6. Help in prognosis of disability.

ECONOMIC ASPECTS

Rehabilitation is economically sound and may save the community some expense.[1] The amount of income of a group of patients in two years would liquidate the cost of their rehabilitation. Few investments pay so well. The value of increased ability to produce among those employed is compounded by the fact that they no longer occupy a costly bed in an institution.

MEDICAL AND ADMINISTRATIVE BENEFITS OF THE PROGRAM

1. Rehabilitation makes it easier for the patient to accept and profit by medical treatment. The psychologic impact of disease or disability certainly taxes the patient's ability to adapt. This depends partly on a patient's personality. It is often difficult to determine all pre-illness, pre-disability factors. Psychosomatic studies amply demonstrate the relationship between emotional problems and physical illness. A serious illness or disability would certainly by itself affect the psychologic social and vocational functioning of the individual. It can not be expected from the patient without skilled help that he remake his concept of himself, reshape his goals constructively, provide for the care of his family and maintain self confidence about his future vocational possibilities. It is the disability rather than the remaining ability that will be uppermost in the patient's mind. There is also a tendency to regress to childish dependency and the sooner this is combated the better for the rehabilitation prognosis.

2. It eases medical and administrative problems. It is well known that some uncooperative patients may have undesirable influence on the ward. Here again rehabilitation may contribute by creating or helping to create a sense of contentment, an outlet for psychologic or physical energy. In addition it helps by releasing hospital beds and shortening the hospitalization period, as shown by studies of Van Ravensway, as mentioned by Dr. Rusk.[2]

Proper utilization of rehabilitation services reduces the number of patients leaving the hospital against medical advice.

3. It prevents relapses. By providing basis for establishing work tolerance as pointed out by Bobrovitz,[3] development of dependencies may be prevented. The rehabilitation in-service provides early case finding. This is important because the prognosis from a rehabilitation standpoint just like any other medical or surgical prognosis has an inverse ratio to the length of time lapsing between the diagnosis and treatment. The longer the patient is allowed to settle into the pattern of chronic dependency the slimmer the chance for full restoration.

Prognosis is influenced also by other factors as stated by Garret[4]: motivation, adjustment, intelligence. Motivation and adjustment are closely related. Motivation refers to the physical, social and

1. Rusk, Howard A.: Rehabilitation Pays Dividends, J.A.M.A. 150, 1952.

2. Rusk and Taylor: New Hope for the Handicapped. Harper, 1949.
3. Bobrovitz, Newman: The Rehabilitation Program at the Municipal Sanitorium, NTA, 1946.
4. Garret and Meyer: Clinical Psychology in the Rehabilitation Process, J. Rehabilitation 27:2, 1951.

economic goals of the patient. Adjustment may be considered the resultant of three psychologic factors in physical disability: the pre-disability personality, adjustment mechanism that the patient adopts, and psychologic factors which result from lesions of the brain.

4. It assures good end results if started early. The controlled environment of a hospital provides an ideal situation for a twenty-four-hour supervised social study. Therefore in a hospital the individual needs may be evaluated and patient referred to an appropriate community agency. The patient[5] who is discharged without a social plan is discharged into a vacuum. The hospital has both opportunity and responsibility to mobilize help for the patient during the critical post hospital convalescence.

THE BASIS OF A REHABILITATION PROGRAM

Utilizing the knowledge of the referring physician in the team of workers the patient is restored to the maximum of his physical, mental, vocational social and economic usefulness. In plain language, one tries to help the patient lead a normal life. The best way to achieve it is to study the patient's average day before the disability and then adjust the activities to suit his remaining abilities.

A time study would probably show that on the average a person spends daily about three hours dressing, undressing and eating; two hours or less traveling to and from work, about eight hours working, about three or more for recreation. The evaluation of the disability must therefore be based on this commonsense study. The training necessarily based on this may be divided into the following objectives: (1) training in activities inherent in daily living including self care and traveling, eating and such, (2) ability to fall asleep and training in physical and mental relaxation, (3) prevocational training and testing and (4) self sufficiency in recreation and socialization, which encourages motivation. Without further amplifying the details of the program it is apparent that there is need for harmonious approach of the whole team to form a program which is not rigid but flexible to suit the individual needs of any given patient. Such a program is individually planned with emphasis on details and may greatly improve the end results for the referring doctor.

Prerequisite of a successful rehabilitation program in a general hospital is an interested physician; the rehabilitation is only as good as the diagnosis and treatment. Secondly, a long range plan of education of the staff should be established and function well. Establishing special conferences is usually not as effective as introducing the orientation of rehabilitation into already existing conferences. Concern is with the psychological aspects of the patient's care. Unfortunately the topic of the social and economic state of the patient's family does not intrigue the mind of physicians and may sometimes seem irrelevant in comparison with the pathology of a rare disease. Another problem that may present itself is referral of patients. This may be helped, in addition to previous points, by institution of rehabilitation rounds. This does not only facilitate case finding but also has an educational value for the house staff by including them into the rehabilitation team. Finally, an establishment or participation in the clinic would help to integrate a successful rehabilitation service. Emphasis of good results and a fair local publicity program is desirable. Coordination of services, utilization of existing community resources, establishment of a strong enthusiastic lay group and a group of volunteers are needed to supplement the services of the team, such as providing driving and helping with recreation. Foundation of a group of industrial representatives willing to employ the disabled is an important help. It is desirable to include work therapy in the program.

PITFALLS OF THE PROGRAM

Disinterest on the part of the doctors and difficulty in case finding may inhibit the service.

Late referrals are a deterrant. Not until a patient becomes a desperately difficult problem is he referred to rehabilitation service. Thus rehabilitation may be obstructed by the hopelessness of the case. This in turn leads to discouragement on the part of the referring doctors, sometimes also affecting the morale of the members of the rehabilitation team.

The patient himself, even though he may be considered a successful rehabilitation end result, frequently feels ungrateful. Successful rehabilitation of the sick or disabled patient may result in a smaller salary, less desirable work and more problems of transportation. Therefore the workers have to be educated so they get satisfaction out of a successful total rehabilitation of the patient irrespective of other considerations.

Careless coordination of the program and delay in its beginning for a new patient means lack of interest and may influence the results.

In summary, the physicians and the general hospital benefits as well as the patient from an in-patient rehabilitation service. The new concept of hospital and doctor's responsibilities means that the patient is followed and assisted from bed to job. In many instances for this goal a home care service may be needed. The doctor and hospitals should be leaders in community rehabilitation activities.

5. Hamilton, Keneth: Counselling the Handicapped in the Rehabilitation Process, Ronald Press, 1950.

Lester E. Cox, of Springfield, member of the Board of Curators of Missouri University, states that the University intends to use hospitals in St. Louis, Kansas City, St. Joseph and Springfield for training medical students. . . . He said the plan should mend relations with the rest of the state.—*St. Louis Post-Dispatch.*

Postgraduate Review

SELECTION OF THE FAR ADVANCED CANCER PATIENT FOR ROENTGENTHERAPY

JAMES O'DONOGHUE, M.D.
ST. JOSEPH, MISSOURI

THREE MORE or less closely related observations concerning the status of far advanced cancer patients prompted this report: First, a clinical, surgical or even a histologic diagnosis may eventually be found to be wrong; second, a so-called hopeless, far advanced cancer patient, perhaps in spite of treatment, may fail to follow a prophetic, adverse course but instead manifest a complete recrudescence with apparent clinical arrest for long and indefinite periods; third, a differential diagnosis between far advanced hopeless and far advanced terminal cancer should be made, if possible, so that useless roentgen therapy may be spared the latter group. Recently in customary five year follow-up studies of cases included in these categories some unusual behaviors were detected.

When unusual survivals of far advanced cancer occur, one is inclined to raise a critical eyebrow. Generally a flaw in the diagnoses can be demonstrated. The literature, however, does reveal reports of several such medical oddities. An evaluation of the benefits derived from treatment in such cases is difficult. Some patients, contrary to the general rule, apparently regardless of care received, survive indefinitely and comfortably with their tumors.

Rohdenburg[1] in 1918 collected and reported 302 cases of cancer with spontaneous temporary or permanent regression. Generally the specific type of medical procedure used was supposed to have brought about the recession and in each case the procedure was hailed as a "cure" only to give failure and disappointment when tried out on a larger group of cases. In analysing his cases he ascribed the following factors as possibly being involved in the tumor regressing: loss of blood supply, effects of heat, either externally or by infection, spontaneous fibrosis and calcification. He concluded that recession of a malignant growth can occur in either sex, at any age period, with any type of malignant tumor irrespective of location or growth; it occurs after a variety of conditions, a proof that no particular one is specific.

Ewing[2] reported spontaneous cures of certain tumors under peculiar conditions. At Memorial Hospital, New York, he observed "several paradoxical cures of established cancer which could not be satisfactorily explained, but none of them impressed the observers as spontaneous cures of cancer."

A long term survival or regression might be merely an unusual natural course of the disease. Deland[3] found the duration in untreated cancer of the breast to be 40.5 months from the time of the first symptoms until death. He also found that 40 per cent would be alive three years, 22 per cent for five years, 9 per cent for seven years and 5 per cent for ten years.

Lee[4] has shown that in advanced cancer of the breast, the curve of life for treated patients is almost identical with Deland's curve of life for patients not having treatment.

Smith[5] reported several gynecologic cases, diagnosed as hopeless, which were completely arrested and returned to normal health following the administration of palliative, not cancericidal, doses of irradiation. He, however, challenging the lack of judgment frequently used in the choice of treatment for the far advanced cancer patient, said: "the twin Grails, cause and cure, are sought with such scientific avidity that relatively little is taught about judgment as to when and when not to treat cancer patients."

Shimkin[6] consolidated statistics of several investigators concerning the duration of life from apparent onset in untreated cancer and found that approximately 20 per cent of all patients with cancer of the breast will be alive five years after the onset. He found that about 10 per cent of untreated lymphoma and leukemia patients live five years following onset. In untreated cancer of the urinary bladder the five year survival rate is 10 per cent, in the cervix 3 per cent and in the rectum 3 per cent. Lenz[7] reported a case of Hodgkin's disease in a female who, though not treated for eight years after she had enlarged supraclavicular nodes, lived eleven years following treatment. Hodges[8] reported a patient with roentgenologically diagnosed carcinoma of the stomach who with no treatment survived eight and one-half years and at autopsy the diagnosis was confirmed histologically.

Medical oddities such as these which continuously appear in the literature bear little weight in the selection of cases for specific treatment. However, they not only stimulate the physician to use caution in venturing a prognosis but they also provide a "moral loophole" whereby an unduly apprehensive patient may be informed that his condition may not be absolutely hopeless.

The treatment of so-called early cancer, namely those in which the tumor is believed to be localized, hence controllable by regional approach, broadly speaking is standardized and frequently an elective procedure. Variations occur chiefly because of local custom and the availability of either trained personnel or necessary equipment.

From the Department of Radiology, Thompson-Brumm-Knepper Clinic, St. Joseph, Missouri.
Presented at the meeting of the Consulting Staff of the Ellis Fischel State Cancer Hospital, Columbia, Missouri, December 7, 1952.

The further the patient drifts into more advanced stages of cancer the less scientific, the more empiric and artistic become his care. It is this group in which the selection of the optimum method of care presents the greatest problem. This can be simplified somewhat if the clinical stage of "far advanced cancer" can be further subdivided into two distinct groups such as: (1) far advanced hopeless cancer suitable for palliative treatment, and (2) far advanced terminal cancer, unsuitable for palliative treatment. The term, terminal cancer, should be reserved for that group of cases in which the predominant clinical manifestation resulting from the neoplasm itself is cachexia and which experience has shown cannot be expected to receive palliation from any known form of definitive care. It is realized that considerable experience and judgment may be necessary to properly pigeonhole borderline cases. It is not suggested that the roentgen therapist abitrarily refrain from examining individual patients purely upon the basis of cachexia or histologic diagnosis. To the contrary, he should withhold his opinion until he has had an opportunity to familiarize himself thoroughly with all of the facts.

Paterson,[9] in an excellent attempt to epitomize the segregation of neoplastic cases into groups suitable or unsuitable for palliative irradiation, has listed the following three inoperable conditions as unsuitable for palliative irradiation: (1) moderately advanced carcinoma in the absence of symptoms, (2) carcinoma with multiple metastases, (3) advanced malignant disease with cachexia. I have found, however, in this group, designated as unsuitable for palliative roentgen therapy, that only in cases of advanced types of malignant disease with cachexia, apparently the result of the tumor, have efforts toward palliation been totally wasted. I believe that cases of moderately advanced carcinoma in the absence of symptoms must be evaluated individually. There are good arguments for permitting these cases to progress untreated until symptoms develope; by so doing the possible favorable effects or irradiation may be reserved until that time when they can do the greatest good. In regard to carcinoma with multiple metastases with painful lesions, radiologists commonly observe gratifying temporary or prolonged beneficial results from roentgen therapy. No fixed set of rules have been found to be infallible. Ewing[10] has stated: "the general condition of the patient determines the results or irradiation, regardless of nearly all other factors. In fresh subjects in good general health, without anemia or cachexia, the results of radiation are usually prompt and definite, whereas in anemic and cachectic subjects with poor circulation, tumors may fail entirely to respond." Probably the most common and unfortunate mistake in this respect is to subject, with no reasonable chance for benefit, an emaciated, cachectic, terminal patient to undergo "token" irradiation merely to satisfy the patient's family or to relieve the referring physician of his responsibilities. Such an action not only results in eventual disappointment to the patient but also causes the public to loose faith in both the accepted methods of treatment and the integrity of the entire medical profession. If the patient's cachexia is the result of his cancer and his disease is widespread, he is unable to tolerate treatments over vast areas in amounts sufficient to attain adequate delecterious effects upon the tumor. The host suffers more than does the disease. The ends must justify the means.

Naturally, regardless of the condition of the patient, before treatment is commenced the diagnosis should be established. Occasionally, as in the occurrence of a solitary mediastinal mass, a test of irradiation may be permissible. Under such circumstances, however, the patient should be treated intensively or not at all. Errors in diagnosis are more common than the profession at large is prone to recognize. Laszlo[11] recently reported a series of cases in which errors in cancer diagnosis were made in several hospital services of good reputation. The final diagnoses were eventually achieved through the exercise of the viewpoint that nothing should be taken for granted. It became increasingly clear in the study of his cases that the original error was one easily made but that continuation of that error was due to an acceptance of the original data without exploring their veracity or completeness. The outstanding causes or error in his cases included: surgical exploration but no biopsy; no surgical exploration; incorrect x-ray impression; incorrect histologic impression; combinations or any or all of these. He concluded: (1) the diagnosis of terminal cancer in some cases is made and no cancer is present; (2) the diagnosis of terminal cancer is made although curable cancer is present, and (3) the diagnosis of cancer is not made although a visible lesion is present for a long time.

Once irradiation, either curative or palliative, has been selected neither the patient nor his physician can be told in advance with any degree of certainty how long, how intensive, or what the results of treatment are likely to be. The back door must be left open. Before treatment of an "incurable" case is commenced, it is important that all the physicians interested in the case and the patient's family know in advance what the patient shall and what the patient shall not be told. One need not lie to a patient who has far advanced cancer. One can tell him as much of the truth as circumstances warrant. Oliver Wendell Holmes said, "The patient is no more entitled to know all of the truth regarding his disability than he is to all the medicine in your saddlebag—he is entitled to that part of it which will do him good." Judgement must prevail; family fears and prejudices can not be condoned. Rarely is a physician forced to answer a "yes or no" question. Rarely is he able. How can a physician, for instance a radiologist,

face a reasonably well educated and informed adult and tell such a person that he or she must undergo a costly and more or less prolonged, often uncomfortable series of x-ray treatments over a period of days to several weeks, merely to care for or destroy a so-called benign lesion, which the surgeon insists has been satisfactorily removed? Is it not better that the patient be told: "a question of doubt as to the existence or identity of cancer or malignancy exists and that irradiation treatments should be given, not in piddling amounts, but intensively or not at all, just as though there was no doubt whatsoever that cancer cells were present in his body?" He can be informed that cases such as his do not always die, that some frequently are arrested and controlled indefinitely. A patient thus handled generally develops confidence in the physician and is willing to undergo appropriate treatment satisfactorily. Under these circumstances no one thereafter has to keep notes in regard to who is fooling whom, a risky business, which eventually, when the truth is known, explodes into a mass of confusion and resentment on the part of the patient and his confidants.

A few cases of unusual survival which have been diagnosed as far advanced, hopeless cancer by the clinician, the radiologist and the pathologist or all are herewith presented. These patients received roentgen therapy in palliative, not so-called cancerocidal amounts. They were subjected as the military would say, to a delaying action. The outstanding point of interest in all of these cases was the satisfactory general physical condition at the commencement of treatment. With the exception of localized relief of pain in radiosensitive types of metastatic bone lesions, I can show no cases, cachectic from the effects of disseminated cancer, which have received worthwhile benefit from roentgen therapy.

REPORT OF CASES

Case 1. V. M., white, divorced, female, typist, aged 50 years, was first seen in July 1946, complaining of intermittent vaginal bleeding for a few weeks and intermittent pains in the left lower quadrant of the abdomen for a few months. The patient had stopped menstruating in September 1944 but began to flow irregularly in 1945. There was no history of pregnancies. Family and past histories were unrevealing. The patient was a well developed, apparently healthy female. A small freely movable mass was found in the pelvis. Preoperative diagnosis was uterine fibroid. Dilatation and curettement revealed slight erosion of the cervix and no cancer. Celiotomy revealed a small uterine fibroid and a mass in the left salpinx. Complete supravaginal hysterectomy was done. Other intra-abdominal organs were explored and failed to show abnormality. Pathologist's impression of the tissue from the salpinx: "primary papillary carcinoma of the fallopian tube." "Nuclei are large and mitotic figures are abundant. The proliferative tumor cells appear to be quite active." The patient was dismissed in good condition. Reexamination in October 1946 (three months following operation) failed to reveal abnormality. On Dec. 11, 1946 (five months following operation) the patient returned complaining of steady pains in her lower abdomen. Pelvic examination revealed a mass about 10 cm. in diameter; this was boggy, somewhat fixed, slightly tender and could be palpated either by abdomen or by pelvic examination. The mass was considered to be inoperable and apparently a local recurrence of the carcinoma. Roentgen therapy (200 KVP, ½ mm. Cu plus 1 mm. Al filter, 50 cm. dist., 36 r/min.) was started Dec. 12, 1946, and discontinued January 28, 1947, following the administration of 1,500 r (air) through each of two anterior crossfired ports. The prolonged time of treatment (forty-six days) was the result of a trip on the part of the patient to another clinic for additional consultation and reassurance. Having been reassured that irradiation was indicated the patient completed the course of treatments. The mass gradually subsided but some boggyness persisted. Yearly examinations failed to reveal any significant change and the patient enjoyed good health. When last examined in August 1952, more than five years following treatment, no evidence of pathologic condition could be found.

Comment.—It is possible that the mass which developed postoperatively was not due to cancer. If it were, it responded to irradiation of modest intensity in an unusual manner. It is postulated that perhaps the general well being of the patient may have played an important role in the response to the roentgen therapy.

Case 2. B. T., white, widow, aged 57, was first seen by her physician on September 12, 1947, complaining of soreness and gas in the abdomen associated with diarrhea. Onset of present illness was about 1943, when there developed spells of bloodless diarrhea which were worse when the patient was nervous. Occasionally she passed mucus. There were no chills, fever or weight loss. The patient had had a hysterectomy in 1942. In 1944 she was told she had a growth, possibly tuberculosis of the bowel. She refused operation. The patient had an anemic appearance and a nodular thyroid. There was a large, rounded, firm mass 13 cm. in diameter in the right lower quadrant of abdomen; no bruit. Pelvic examination revealed no evidence of abnormal pelvic masses. Rectal examination was normal. Urine was normal, red blood count was 4,750,000; Hb. was 12.1; white cell count 13,700; differential was "within normal limits." X-ray examination of the colon showed a large funnel shaped smooth filling defect involving the cecum and resulting in narrowing of its lumen; although its appearance was characteristic of nothing specific, the radiologist believed that it "should be considered as carcinoma until proven otherwise." Exploratory operation on September 23, 1947, revealed that the liver contained many nodules, presumably metastatic neoplastic tissue. A large mass in the cecum the size of an orange was felt. It was impossible to deliver this mass to a suitable position for removal. A transverse ileocolostomy was done. No tissue was removed for biopsy. The surgeon's diagnosis was: "Inoperable neoplasm of cecum." In March, 1949, eighteen months following surgical exploration, the patient was referred to the radiologist for a test of irradiation and 1,500 r (air) were administered in fourteen days to each of two tangential anterior ports (factors were 200 KVP,

50 cm., 0.5 mm. Cu. plus 1 mm. Al. filter). The mass became more movable in a few weeks and the patient felt much more comfortable one month following irradiation.

In April 1950, thirty-one months following surgical exploration, the patient returned complaining of abdominal discomfort, a continuation of watery stools which, however, was no worse than any time previously. The mass was more movable and perhaps slightly larger than when first examined, thus suggesting that irradiation may have rendered this case operable. Complement fixation test for amebiasis was negative. Blood counts were normal. Stool cultures were negative for pathologic parasites or organisms. Flocculation test for syphilis was negative. Laparotomy revealed a large mass involving the cecum and much small bowel. The right half of colon and ileum were resected. Liver masses were somewhat smaller than at the time of the first operation. Histologic studies of the cecal mass and several liver masses revealed marked inflammatory changes, nonspecific, chronic for the most part with no evidence of malignancy. The patient returned to work and has continued to work until the present time. When last see, October 1952, five plus years following first examination, the patient was improving and was working daily as an office clerk. She enjoyed good health except for moderate diarrhea.

Comment.—The lesson to be learned is an old one. Unless the life of the patient is to be jeopardized, a biopsy of "suspicious tissue" should by all means be obtained at the time of surgical exploration. This case evidently looked so much like a hopeless cancer that the surgeon overlooked his basic training in this respect.

Case 3. Mrs. G. E., white widow, aged 63, was first seen on October 7, 1946, complaining of chronic exhaustion for several months, gnawing in the epigastrium for a few months and occasional nausea, but no vomiting. She "filled up" and felt bloated after a few bites. There was no weight change. Her weight was 139, height 66 inches, blood pressure 130/80, pulse 92, temperature 100.4 F. Patient appeared moderately well developed and nourished, apparently enjoying good health. Some palpable masses or small nodulations were seen in the left lobe of the thyroid (these have been unchanged for years according to the patient). Heart revealed occasional premature, ventricular contractions. Abdomen was protuberant, tight and a large nontender mass was felt in the right lower quadrant. A questionable fluid wave was present. Pelvic examination revealed that the mass was movable and was not attached to the rectum or bladder. There was a right inguinal hernia and grade II edema of the inferior extremities. Rectal examination was normal and x-ray examination of chest was normal. Hb. was 12, red blood cells 4,500,000, leukocytes 9,500. Celiotomy on October 21, 1946, revealed a large amount of serosanguineous fluid and a large tumor of the left ovary 14 cm. in diameter which was adhered to the small intestines and to the abdominal wall. The mass, both ovaries, tubes and the appendix were removed. Pathologist's report: "cystadenocarcinoma of ovary, left, Grade I or II with cyst implants to fallopian tubes." Postoperative course was uneventful and the patient was referred one month later (November 18, 1946) for roentgen therapy. Examination revealed that the pelvic structures were slightly tender, boggy and the abdomen felt full and somewhat protuberant. A palpable mass, presumed to be a node, 2 cm. in diameter, was felt in the right labia majora, and a similar mass 1.5 cm. in diameter was found in the left labia. The patient was believed to have remote metastases to the vulva and residual cancer in the abdomen. Irradiation was administered to the lower abdomen and pelvis via 2 anterior and 2 posterior ports (200 KVP, ½ mm. Cu. plus 1 mm. Al., 50 cm. distance, 15 by 20 cm. ports). Irradiation was given as tolerated until each anterior port had received 1800 r (air) and each posterior port 1200 r (air) in four weeks. The vulvar lesions were given a total of 2130 r (air) in four weeks. Following treatment the labial masses disappeared and the abdomen felt less boggy and full. The patient, however, developed pains in the lower back. Radiographs of the lumbar spine in March 1947 (five months following operation), revealed marked deficiency of mineral content in all of the bones but no evidence of fracture or pathologic condition. Backache persisted, became worse, and radiographs were again made July 2, 1947 (nine months following surgery), at which time the first and fourth vertebral bodies showed compression and narrowing of their vertical diameters; these were consistent with the manifestations of pathologic fractures, probably due to metastases. During this period of observation the patient was gaining weight, apparently the result of an increase of the abdominal girth so that she was forced to alter her waistline clothing. She was treated with codeine, aspirin and bed rest. Under this regime the pain in the spine gradually and spontaneously subsided, eventually completely disappearing. The patient's arrest or recovery has evidently been complete and she was seen last in August 1952, at which time no evidence of cancer was apparent. Roentgenograms show evidence of complete bony union of the compressed vertebrae.

Comment.—It is possible that the roentgenologic diagnosis of pathologic fractures of the vertebrae was in error. No other form of pathologic condition could be demonstrated although malacic disease and hyperparathyroidism were considered. The unfavorable course for reasons undetermined, suddenly reversed itself in the patient whose general appearance of wellbeing constantly remained satisfactory.

Case 4. Mr. C. H., aged 67, white cook, was seen first on June 9, 1946, following surgical excision of a black or pigmented skin lesion 4 cm. in diameter from the left posterior thorax inferior to the scapula. The patient stated that the lesion had shown noticeable increase of size. The physician found also some enlarged axillary masses, and these, too, were removed. Pathologic report was melanocarcinoma in the primary skin lesion, and in the right axillary node. There was no report of the biopsy of the masses in the left axilla. Palliative (gestural) irradiation was started July 8, 1946, at the insistance of the surgeon. Relatively small amounts of roentgen therapy, namely 1,000 r (air) to each of three crossfired ports covering each axilla (200 KVP, 0.5 cu. plus 1 mm. Al. filter, 50 cm. dist, 10 by 10 ports) were given. The primary site on the back was not treated. In August 1946, (one month following operation) the right upper extremity became swollen

and showed brawny induration. A black and white cauliflower-like, hard mass 4 by 6 cm. in diameter developed rapidly within a few weeks in the skin on the dorsum of the right hand. This resembled grossly the first removed lesion on the back and was assumed to be a metastatic melanoma similar to the original lesion. This was excised with endotherm knife, and the large postoperative skin defect at this point was given 2,000 r (air) in four days. This tissue was not studied histologically. The wound healed completely leaving an elastic scar about 2 cm. in diameter. On February 11, 1947 (seven months following the first operation) a small, cauliflower-like, dark, pigmented mass 2 by 2 cm. in diameter developed rapidly in the skin of the right side of the face. This was excised with electric cautery and did not recur. By May 1947, the edema of the right upper extremity had almost subsided. However, a small palpable nodule was again detected in the right axilla. In an attempt to soothe the patient's mind more than to cure metastatic melanocarcinoma, two small (or psychic) x-ray treatments of 500 R each were given to the right axilla in three days. Following this the mass disappeared gradually, and the edema of the right upper extremity became almost imperceptible. His health improved and he resumed his occupation. The patient was seen last in July 1952 (six years following surgery) when admitted to another hospital for an acute coronary thrombosis. He showed no evidence of cancer at that time and was dismissed from the hospital. In October 1952, he was still enjoying satisfactory health.

DISCUSSION

Melanoma (melanocarcinoma, melanosarcoma) are terms which confuse the clinician who attempts to study the subject as reported by various pathologists. One must generally accept without too much questioning the pathologist's so-called "legal" diagnosis. Although these lesions are generally classified as extremely radioresistant, a modest review of the literature reveals that a small percentage seem to respond to irradiation. In one group of cases reported by Adair from the Memorial Hospital, New York, 2.5 per cent responded to irradiation. Sylven[12] reported 48 per cent of five year cures of localized melanoma, 7 per cent of melanoma with regional lymph node invasion to one gland station, of 3 per cent for those with involvement of two or more groups of glands or distant metastases.

Wigby and Metz[13] reported a case which had some manifestations common to this case. Theirs was a 43 year old, white male, who had a melanotic mole on his face, which later metastasized in a wide-spread manner, generally to the subcutaneous tissue especially over the arms, abdomen and almost any part of the skin of the entire body. He had generalized emaciation, weight loss and weakness. Biopsy of the primary and metastatic lesions showed "malignant melanoma." This patient was treated by irradiation of the pituitary gland, improved during the treatments. Later biopsy of one of the subcutaneous nodules which unlike some of the others had not disappeared was reported as chronic inflammatory granulation tissue with marked melanin deposition. The patient regained his weight, his ability to work again and had no complaints when seen six months later. The reason for the use of x-ray to the pituitary in this case was a hunch based upon the observation that the melanophore expanding hormone, which serves a useful function in the amphibia and some fish, is found in highest concentration in the intermediate lobe of the pituitary of both the amphibia and the human.

After it was demonstrated that my patient had survived more than five years following what had appeared to be a hopeless situation the tissues were reviewed by another recognized and competent pathologist who reported: "pigmented seborrheic keratosis," in both the skin and axillary node biopsies.

Case 5. M. H., white, single, 65 year old female, was admitted to the Clinic on October 7, 1947, complaining of occasional vaginal bloody spotting off and on for about two years and in daily significant amounts for about two months. On infrequent occasions for several years she had suffered spells of pain and distress in her right upper quadrant. These spells had no relationship to time or to types of food. Systemic history was otherwise normal. Menstrual history was not recorded other than to say "no pregnancies." Physical examination (positive findings) showed an apparently well developed and well nourished female. Thre was shifting dulness and distention of the abdominal wall, which were interpreted as evidence of free fluid in the celomic spaces. No masses could be palpated in the abdomen. Pelvic examination revealed slight bloody discharge coming from the cervix. The uterus was larger than that of a nulliparous individual, felt boggy and was fixed. On October 10, 1947, uterine curettement produced abundant amounts of abnormal tissue. The uterus admitted a sound of 8 cm. Examination under anesthesia revealed bogginess and induration surrounding the uterus plus almost complete fixation of this structure. There was evidence of free fluid in the peritoneal spaces.

Pathologist's report was: "Adenocarcinoma of the uterus, Grade III." A 50 mg. radium intrauterine tandem capsule to total 3300 milligram hours was administered. This was followed by external irradiation of 1900 r (air) through each of four ports to the lower abdomen and pelvis (200 KVP 50 cm., ½ mm. Cu. and 1 mm. Al., 36 r per min.). Total time of radium and roentgen therapy was forty-two days. The patient improved satisfactorily and follow-up examination failed to reveal evidence of abdominal fluid or masses. She refused to permit follow-up exploratory surgery. In January, 1949 (fifteen months following irradiation) the patient developed upper abdominal distress and pain; x-ray examination revealed a nonvisualized gallbladder. Surgical exploration failed to reveal any evidence of residual intra-abdominal masses other than a small nodule in the left lobe of the liver. The gallbladder was pathologic and was removed. Pathologist's report was chronic cholecystitis. The patient thereafter enjoyed good health until May 1952 (four years, seven months following first admission) when she returned complaining of bloody vaginal spotting. Pelvic examination revealed a large pear-shaped, partially fixed pelvic mass approximately 12 cm. in diameter

which was thought to be the uterus. Cervical dilatation produced a gush of turbid, yellowish, nonodorous fluid slightly more viscous than urine. It was estimated that about 500 cc. came forth. Curettage failed to reveal any solid tissue. The fluid was examined and reported: "negative for cancer cells." At the present time (November 1952) more than five years after admission the patient is enjoying satisfactory health and shows no evidence of cancer.

Comment.—Long term survival of relatively far advanced carcinoma of the uterus treated with irradiation is not unusual. It is realized that fluid in the abdominal cavity is no contraindication to surgery but fixation of the pelvic structures is. A recurrence of a pelvic mass in a cancer of the uterus does not always mean a recurrence of cancer. The most important single factor in the favorable course seems to have been the lack of cachexia at the commencement of the treatment.

CONCLUSIONS

1. In the diagnosis and treatment of cancer let nothing be taken for granted; let not final judgment be passed until all of the evidence has been checked by reliable sources. If the patient's course then varies discernibly from the usual behavior of similar disease it is suggested that complete reevaluation of all the diagnostic data be made.

2. One should strive if possible to differentiate between "hopeless" and "terminal" cancer. One should not be influenced or coerced into treating terminal cancer with measures which experience has shown can do no good.

3. Experience and judgment should be blended with science, as Armand Trousseau said in 1861: "All sciences touch art at some point, all arts have their scientific aspect; the worst scientist is the man who is never an artist, the worst artist is the man who is never a scientist."

BIBLIOGRAPHY

1. Rohdenburg, G. L.: Fluctuation in Growth Energy in Man With Special Reference to Spontaneous Remission, J. Cancer Research 3:193, 1918.
2. Ewing, James: Neoplastic Diseases, Philadelphia, W. B. Saunders Co., 1940, p. 45.
3. Deland, E. M.: Surg. Gynec. & Obst. 44:264-268, 1927.
4. Lee, B. J.: Therapeutic Value of Irradiation in Treatment of Mammary Cancer, Ann. Surg. 88:26-47, 1928.
5. Smith, Frank R.: Palliation of Cancer in Gynecology, Am. J. Roentgenol. 39:866-870, 1938.
6. Shimkin, Michael B.: Duration of Life in Untreated Cases, Cancer 4:1-8, 1951.
7. Lenz, Maurice: Clinical Therapeutic Radiology, edited by U. V. Portman, New York, Thomas Nelson & Sons, 1950, p. 545.
8. Hodges, Fred Jenner: Gastrointestinal Tract, Chicago, The Year Book Publishing Co., 1944, p. 126.
9. Paterson, Ralston: Cancer From the Viewpoint of the Radiologist, Brit. J. Radiol. 12:526-531, 1939.
10. Ewing, James: Radiosensitivity, Radiology 13:313-318, 1929.
11. Laszlo, Daniel; Colmer, Malcomb L., et al: Errors in Diagnosis and Management of Cancer, Ann. Int. Med. 33:670-689, 991-1007 (September) 1950.
12. Sylven, Rengt: Acta. radiol. 32:33-59, 1949.
13. Wigby, P. E., and Metz, H. M.: Am. J. Roentgenol. 41:415-419 (March) 1939.

Advertisement

From where I sit
by Joe Marsh

Pretty "Foxy" Terrier

Talking about dogs the other night—and Sandy Johnson topped everything off with a tall story about his fox terrier, "Boscum."

According to Sandy, "Comes bird season and that dog won't stir if I take down my rifle. *Same if it's deer season and I go for my* shotgun—*he won't move, but he's scratching at the door if I so much as look at my rifle!"*

One day, Sandy decided to fool him. He took down *both* his shotgun and his rifle—and swish, Boscum was on his way! So Sandy put the guns back and took out his fishing rod. He went outside and there was Boscum—digging like crazy for worms!

From where I sit, a dog that can outguess humans is as rare as a human that can outguess other humans. For instance, I like a glass of beer with lunch but I wouldn't pour you one without first asking. I want to practice my profession the way I think best, but I won't tell you how to do your job. Respecting the other's rights keeps freedom from "going to the dogs."

Joe Marsh

Copyright, 1953, United States Brewers Foundation

Case Report

WEBER-CHRISTIAN DISEASE

A REPORT OF TWO CASES TREATED WITH CORTISONE

LEE B. HARRISON, M.D.
ST. LOUIS
JOHN A. SAXTON, JR., M.D.
ST. LOUIS

THERE HAVE been an increasing number of case reports of relapsing febrile nodular nonsuppurative panniculitis since the salient features of the disease were first reported by Pfeiffer[1] in 1892. The name Weber-Christian disease has gradually come into usage following Weber's report[2] in 1925 and the report of Christian[3] in 1928.

Up to the present time there have been approximately sixty cases of this disease reported with numerous and varied opinions as to its etiology. In that the disease is of relapsing type often with spontaneous recovery and occasionally with fatal termination, there have been differences in the interpretation of the effectiveness of various types of treatment which have been employed so far.

Hallihan and Klein[4] were of the opinion that this disease is more common than is realized and frequently goes undiagnosed. Proposed etiologic factors in this condition have been legion and by numerous authors. They include infectious agents, halogen compounds, renal failure, dietary insufficiency, trauma, impairment of fat metabolism, foreign body reactions, endocrine changes and numerous others. The condition is, as the title states, usually relapsing, is sometimes fatal and sometimes will last for many years. For six years

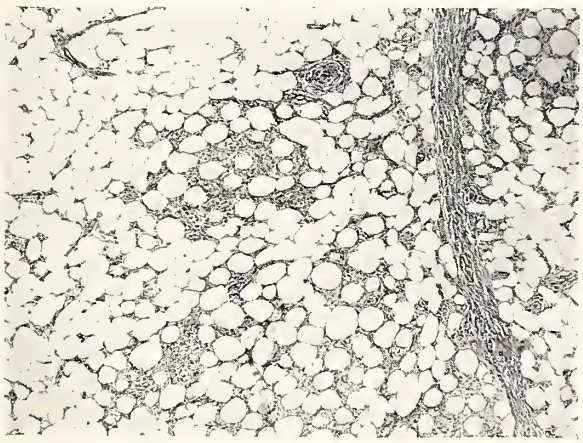


Fig. 1. Low power photomicrograph of representative area of biopsy from case 1. Note granulomatous foci distributed throughout the adipose tissue. H. & E. Stain. X 35.

Christian followed his case which had ten relapses. Baumgartner[5] reported two relapses seven years apart in his case.

From the Department of Internal Medicine and the Department of Pathology, Missouri Pacific Hospital, St. Louis.

A most excellent review of the literature and a case report in which cortisone was used was made by Shuman[6] in May 1951. Cortisone was given for only ten days in that case, which resulted in reduction of temperature to normal for five days. The case also was given other types of medication and finally had a fatal termination.

We feel that the two cases which we have seen

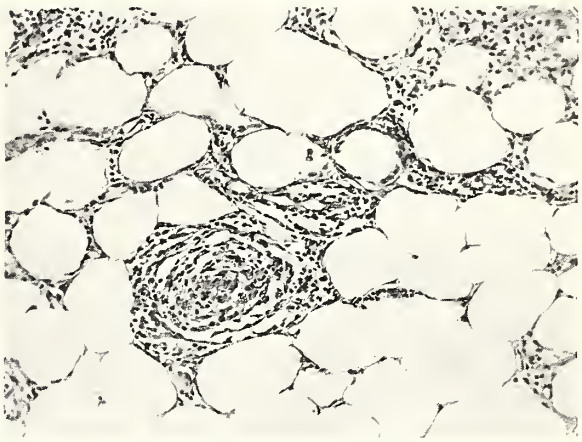


Fig. 2. High power photomicrograph of a granulomatous focus seen in figure 1. H. & E. Stain. X 150.

recently are worthy of report in that both were given cortisone with immediate improvement. One case relapsed with prompt remission again following cortisone therapy.

CASE REPORTS

Case 1. M. R., a married woman, aged 29, entered the hospital on April 21, 1952, complaining of pain and nodular swelling in the calves of both legs, more so on the left. It was also significant that she stated she had noticed lumps under the skin which disappeared and recurred. The onset of the condition was in January 1952, and at that time she had fever; however, she had not had any around the time of admission.

She was a well developed female, weight 147 pounds, height 5 feet 2 inches, in no apparent pain and with normal temperature. There was a definite generalized swelling of both lower legs from below the knee with a blotchy discoloration and tender nodular swellings beneath the skin over the calves. There were small depressions noted, particularly on the left calf where previous nodular swellings had been present. The feet were not cyanotic and peripheral vascular pulsations were normal on both sides. Careful examination of the rest of the body disclosed no other swellings or areas of tenderness.

The rest of the examination was essentially normal.

Laboratory findings showed normal hemoglobin and red cell values. White blood count 7,250, with normal differential count. Urinalysis was normal. Basal metabolism was minus 3.

Biopsy of a nodule from the left leg approximately 2 by 1 cm. was performed on April 24, 1952. The specimen consisted of an elliptical piece of skin measuring 3.5 by 1.8 cm. overlying a column of adipose

tissue 2 cm. in depth. Step sections revealed miliary gray white areas distributed throughout the adipose tissue. On microscopic examination the epidermis and dermis were not unusual. In the subdermal adipose tissue were accumulations of macrophages with foamy cytoplasm, often in nodular arrangement, surrounded by lymphocytes and large mononuclear cells (figs. 1 and 2). Similar inflammatory cells were seen around almost all of the small vessels. A few multinucleated giant cells were present. Diagnosis was nodular nonsuppurative panniculitis (Weber-Christian disease).

The patient was given antibiotics and sulfadiazine and was discharged, unimproved, on May 1, 1952, to be kept under observation.

She returned to the hospital on May 20, 1952, at which time she advised that her condition had become slowly worse. There was further swelling of the left leg and the right leg had developed more nodules, particularly over the calf. The patient complained of pain in both legs to such an extent that she was unable to walk and was confined to a wheel chair. Temperature on admission and its subsequent course during hospitalization was again normal, with normal blood findings. Examination disclosed a definite increase in the swelling of both lower legs and an increase in the number of tender nodules.

On May 21, 1952, cortisone therapy was begun, 50 mg. being given four times daily. The effect was quite dramatic in that the day after beginning this therapy the patient stated she felt considerably improved and the tenderness was less. On May 23, two days following institution of the therapy, several of the nodules over the right calf, which were the most recent ones, were definitely decreased in size and the edema was rapidly subsiding from both legs. Improvement continued and on May 28 the patient was able to sit up and walk a little without pain. At that time the cortisone was decreased to 50 mg. three times daily. On June 1 a further decrease of the cortisone to 50 mg. twice daily was made. On June 3 the patient left the hospital walking, although somewhat lamely, which she attributed to weakness of the left knee. The swelling of both legs was entirely gone and there were only one or two small nodules remaining over each calf which were definitely not tender. There were mild depressions over the skin where the nodules had previously been.

Since her discharge from the hospital the patient has been under observation by one of us, (L. B. H.), with consistent improvement. Cortisone was discontinued four weeks following her discharge from the hospital. When seen on October 23 the patient was doing her own housework and feeling as well as she ever did. The legs were entirely normal except for remaining discoloration and depressions over the skin of each calf. The patient returned to the office on December 9, at which time she stated that two weeks previously she noticed the appearance of a nodule over the left tibial region which was followed by other nodules involving subcutaneous tissue over both calves and over the anterior surface of both lower legs. No nodules elsewhere were noticed. Cortisone was started again, 200 mg. daily, for one week and then decreased to 100 mg. daily and 50 mg. daily. On February 3, 1953, the nodules had entirely disappeared and the patient was again doing her own housework.

Case 2. A. H., aged 48, was admitted to the hospital on August 2, 1952, complaining of chills, fever, headache and backache of one week's duration. On careful questioning she admitted not feeling well for several weeks prior to onset of chills. There had been some sore throat and general malaise. One week prior to entering the hospital she consulted a physician who gave her 600,000 units of penicillin and three days prior to admission she was given 600,000 units again. The past history was irrelevant as was the family history. On admission to the hospital the patient was quite ill, temperature 100.2 F., skin dry. The pharynx was slightly injected. Heart rhythm was regular, no murmurs, lungs clear, abdomen flat and soft. Neither spleen nor liver was enlarged. Pelvic examination was not notable. There was no definite adenopathy. There were no nodular swellings; however, there was moderate tenderness to pressure over the calf of each leg. During the first seventeen days of hospitalization there were frequent chills and daily temperature fluctuation between 104.5 F. and 98.6 F. The laboratory findings during that period were as follows:

Numerous urinalyses were negative. White blood count varied between 8,400 and 5,800, with normal differential counts. Numerous malarial blood preparations were negative. Red blood count varied between 3,420,000 and 4,120,000. Hemoglobin was 10 to 12 gm., blood nonprotein nitrogen was 30 mg. Blood sugar was 111 mg. Serum proteins were total 4.85, albumen 3.60, globulin 1.25. Typhoid, paratyphoid and brucellosis agglutinations were negative on two occasions, as was proteus 0X19. Blood cultures showed no growth and urine cultures were negative. Spinal fluid examination was normal.

Cystoscopy and pyelo-ureterograms were not notable. On chest plate there were a few small calcifications in the left lung field apparently due to old calcified tuberculous foci. Otherwise the lungs showed no evidence of recent or old disease. Heart and aorta were within normal limits. X-ray of the chest taken three weeks later was unchanged. Blood was examined for lupus erythematosus cells on August 23, 1952, and none were found.

On August 16, 1952, a muscle biopsy of the left gastrocnemius muscle was made with the thought in mind of ruling out periarteritis nodosa. The biopsy showed no specific change in the muscle or blood vessels.

At that time, in that all types of medication, including penicillin, streptomycin and chloromycetin, were negative, cortisone was advised and it was started on August 18, 1952, the patient being given 50 mg. every six hours. On that date it was noted that in addition to increasing tenderness and pain in the calves, for the first time there were small nodules in the subcutaneous tissues in the calf of the left leg and later in the right. It was not until September 2, however, that we were able to obtain a biopsy of these nodules. In the meantime the temperature had dropped dramatically and immediately to normal following administration of cortisone on August 18. The temperature remained normal until August 26 when there was a rise to 100.5 F. and again on August 27 there was a rise to 100.5 F. The temperature then became normal and stayed normal throughout the remaining hospitalization period which lasted until September 15. Cortisone was discontinued on August 28.

The biopsy of the subcutaneous tissue nodule on September 2 was as follows:

The specimen was a small piece of fibroadipose tissue measuring 9 by 6 by 4 millimeters. Microscopic sections showed adipose tissue containing granuloma-

tous foci consisting of epithelioid cells, multinucleated giant cells often surrounding large vacuoles, and lymphocytes (figs. 3 and 4). Vessels were slightly thickened but showed no specific change. The acid fast stain was negative. Diagnosis was lipogranulomatosis (Weber-Christian disease).

The patient has been followed quite closely since she left the hospital on September 15 and when last seen on January 30, 1953, she was clinically well and working. There was no residual at that time except for small depressions noted over the posterior surface of each calf.

COMMENT

The prompt remission of clinical symptoms in both patients following cortisone administration indicates that this drug had influenced favorably the course of the disease. In the first patient, a relapse occurred several months after the original episode, and the recurrent symptoms again responded to cortisone. It is thus evident that cortisone, although valuable in treatment, is not a cure for Weber-Christian disease.

These observations shed little light on the etiology of the disease beyond supporting the probabilities that it is not a local bacterial infection and that the tissue reactions which give rise to the symptoms are suppressed by cortisone much as in certain collagen diseases. The similarity of response to cortisone, together with the well known chronic remittent course of Weber-Christian disease, suggest a relationship to collagen disease.

The histologic examinations, limited to biopsy for diagnosis, do not contribute to an understanding either of the pathogenesis of Weber-Christian disease or of the effects of cortisone in this condition. In both patients the lesions biopsied appeared

Fig. 3. Low power photomicrograph of the biopsy from case 2 showing granulomatous foci in subcutaneous fat. H. & E. Stain. X 35.

to be in the macrophagic stage. As seen in the photomicrographs (figs. 1 and 4) there was greater cellular activity in the second case, although cortisone had been given to this patient for a period of two weeks prior to biopsy. However, the first patient had had symptoms for a longer period before biopsy. It is probable that various stages of the lesion are present at the same time and that the site of biopsy will thus largely determine the histologic picture.

It is notable that the lesions in both of these patients were confined to the lower legs and, while this is a common site for lesions of this disease, as a rule there is involvement of subcutaneous tissues

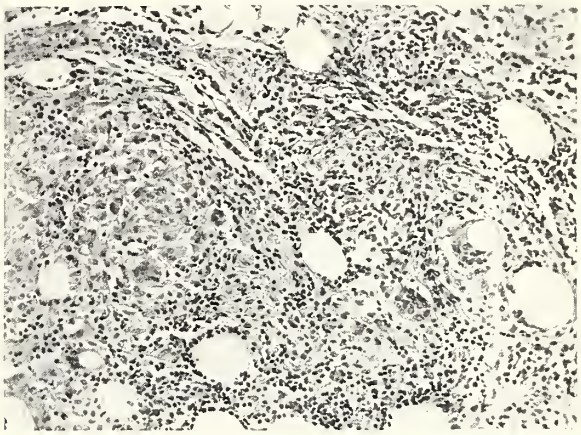


Fig. 4. High power photomicrograph of a granulomatous focus in figure 3, showing lipophages and multinucleated giant cells, engulfing fatty material. H. & E. Stain. X 150.

of other parts of the body such as the abdomen, trunk, chest and neck. It is also to be noted that both of these cases were women. Apparently the disease is seen four to five times as often in the female sex.

CONCLUSIONS

1. Two cases of relapsing febrile nonsuppurative nodular panniculitis are reported, both of whom were given cortisone with prompt relief of symptoms and disappearance of nodules. One case relapsed and again improved with cortisone therapy.
2. We feel that this disease should be kept in mind in any obscure case of relapsing, febrile disease and biopsy made on any suspicious nodule (a second biopsy was necessary in case 2 before diagnosis was confirmed).
3. The cause of Weber-Christian disease and the mode of action of cortisone on it are not known.
4. Further evaluation of cortisone therapy in this disease is indicated.

607 N. Grand Ave.

BIBLIOGRAPHY

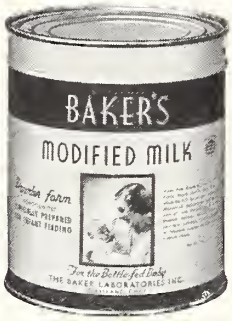
1. Pfeiffer, V.: Über einen Fall von herdweiser Atrophie des subcutanen Fettgewebes, Deutches Arch. klin. Med. **50**:438-449, 1892.
2. Weber, F. P.: Relapsing Non-Suppurative Nodular Panniculitis Showing Phagocytoses of Subcutaneous Fat Cells by Macrophages, Brit. J. Dermat. **37**:301-311, 1925.
3. Christian, H. A.: Relapsing Febrile Nodular Nonsuppurative Panniculitis, Arch. Int. Med. **42**:338-351 (September) 1928.
4. Hallihan, J. D. and Klein, Thomas: Ann. Int. Med. 1179-1199 (May) 1951.
5. Baumgartner, W.: Zur Pathologie des Fettgewebes: Die Panniculitis, Helvet. Med. Acta. **11**:155-159, 1944.
6. Shuman, C. R.: Relapsing Panniculitis (Weber-Christian Disease), Arch. Int. Med. **87**:669-681 (May) 1951.

50 YEARS AGO

". . . in all cases where the milk supply is not private and its conditions fully known, all milk for use in the nursery should be boiled immediately upon its arrival in the house. . . . Milk completely sterilized by several exposures to heat . . . and hermetically sealed, will keep sweet for many weeks, and this device is most valuable for long journeys or ocean voyages." (1)

Baker's Modified Milk *Powder* is suggested for baby's safety when traveling. Mother can put the prescribed amount of powder for each feeding in a capped, sterile nursing bottle and carry boiled water in a Thermos bottle. Each feeding can then be prepared just before use.

The powder is also especially adaptable for use wherever refrigeration facilities are not available. Here, too, individual feedings may be mixed as needed.



POWDER and LIQUID

Boker's Modified Milk is made from Grade A Milk (U. S. Public Health Service Milk Code), which has been modified by replacement of the milk fat with animal and vegetable oils and by the addition of carbohydrates, vitamins and iron.

BAKER'S MODIFIED MILK *POWDER FORM*

Simplifies infant feeding when traveling and whenever refrigeration facilities are not available

(1) Cheadle—*Artificial Feeding and Food Disorders of Infants*, Sixth Edition (1906)

BAKER'S MODIFIED MILK

THE BAKER LABORATORIES INC.

Main Office: Cleveland 3, Ohio
Plant: East Troy, Wisconsin

Division Offices: Atlanta, Dallas, Denver, Greensboro, N. C., Los Angeles, San Francisco, Seattle

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

Special Article

MISCONCEPTIONS CONCERNING NUCLEAR EXPLOSIONS

CARROLL P. HUNGATE, M.D.
KANSAS CITY

On the morning of March 17, 1953, a nuclear explosion originating at the Nevada Proving Grounds of the Atomic Energy Commission was brought by television and radio into the homes of millions of Americans.

The explosion was spectacular. The press and radio coverage was complete in the reporting of the glamorous and terrifying aspects of "Operation Dooms Town." Many who witnessed the experiment from "News Knob" and who had been actively engaged in Civil Defense work for several years were not in accord with certain reports which exaggerated the terror of the explosion.

All know by now that nuclear explosions produce their devastating effects through the release of three types of energy: thermal in the form of light; mechanical in the form of blast, and nuclear in the form of radiation. There is no effort to ignore the tremendous power of an atomic weapon but one must realize it is just another weapon in the ordinance arsenal. Let us, therefore, analyze realistically, each type of energy released in the light of its true resulting effect.

The radiation effect will be taken up first because of the alleged horrifying aspects attached to it. At certain National Medical Civil Defense meetings Missouri physicians have endeavored to reduce the radiation problem to its proper size. We were advised by FCDA personnel that the military considered radiation of greatest importance. We had no answer to that statement. After witnessing a nuclear explosion, an answer can be given.

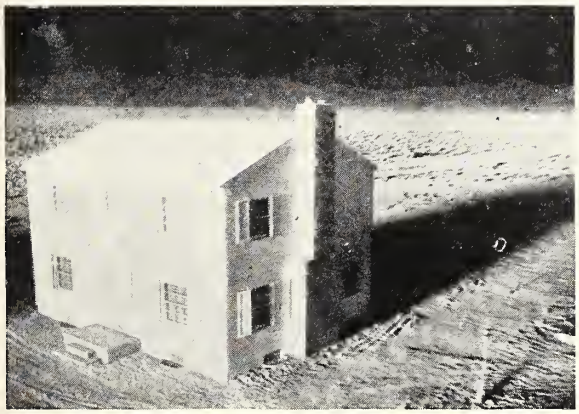


Fig. 1. Shows house lighted by blast.

Las Vegas, Nevada, March 17. Complete destruction of house No. 1, located 3,500 feet from ground zero, by the March 17 atom blast at Yucca Flat is shown in these photographs taken by a specially installed automatic Mitchell 35 mm. motion picture camera located 60 feet from the doomed house. Shooting 24 frames per second, the time from the first to last picture was only two and one third seconds. The camera was completely enclosed in a two inch lead sheath. Only source of light was from the bomb. Photographs are by Edgerton Germeshausen and Grier, Inc. (E.G.&G.) for A.E.C.

The radiation problem must be divided into three parts: the Military Problem, the Atomic Energy Commission Problem, and the Civil Defense Problem. Each is relatively distinct and separate.

The military are concerned with how much radiation troops can absorb and still retain fighting efficiency and how soon they can move through or near to Ground Zero. The objective of ground troops is to advance and take over enemy positions. The Air Force is concerned with the amount of radiation in the upper atmosphere for planes may have to fly through or near the cloud.

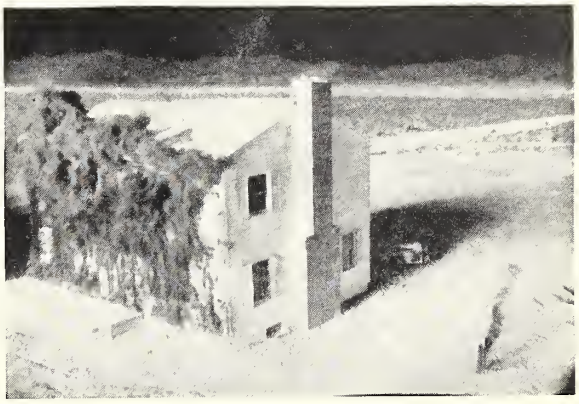


Fig. 2. Shows house on fire.

The Atomic Energy Commission has a different problem. The atomic industry desires to employ personnel over a life time. Therefore, they must keep the weekly absorption of radiation to a minimum—.3 roentgens per week. At the test sites, for research purposes, animal and instruments are placed at or near Ground Zero. After the test, research personnel desire to recover their equipment and animals as soon as possible. The experiments continue year after year so research personnel must keep their amount of radiation exposure to a minimum. A definite low standard is set for a given period. When one has had his full exposure he is prohibited from entering a "hot" area for the duration of the particular test period.

But for Civil Defense the problem of radiation is in no way comparable to either of the previously discussed problems. Civil Defense workers will not be moving into or through Ground Zero. Most people in that area will be killed or so heavily irradiated that death will most certainly ensue. Civil Defense workers have no research instruments or animals to remove from the area directly beneath the bomb burst.

Furthermore, it must be remembered that the

explosion on March 17 was from a tower 300 feet high. An aerial burst over a target city would leave little residual radioactivity compared to a tower burst.

It must be remembered that the radioactive dust cloud was unique to Yucca Flats. Yucca and

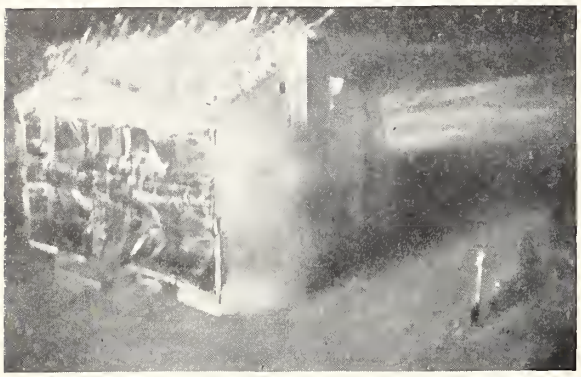


Fig. 3. Shock wave blows fire out and building starts disintegrating.

Frenchmen's Flats are dried up lake beds. On a windy day clouds of dust rise obscuring the surrounding mountains. With a nuclear explosion at 300 feet about one third of the ball of fire touches the ground. The dust from the lake beds, ankle deep normally, rolls up in the dense cloud witnessed on television. A similar explosion in a Kansas cow pasture would not produce such a dust cloud. This was a spectacular picture and captured the imagination of the reporters and certain Civil Defense people. For example, the Civil Defense Director from Los Angeles, California, was quoted as saying, "We learned that we must be particularly careful about radiation . . . that because of radioactivity, they were not allowed to go

Fig. 4. Progressing disintegration.

near either of the two dwellings . . . this density of radiation under certain conditions impressed me most at the test." Too much is accepted at face value without giving sufficient thought to the subject.

The problem of instruments is also lightly taken by too many. Most monitoring instruments have a 15 to 35 per cent error in accuracy. The calibration and maintenance of the instruments require a battery of electronics technical experts. Instruments must be frequently calibrated through a known source of radiation. Where in Civil Defense is one going to obtain radioactive material for this calibration? The Atomic Energy Commission is not going to turn over to Civil Defense, at random, radioactive cobalt for use by target cities. To maintain the instruments the monitoring units would have to be composed only of electronics, radio and television technicians. These individuals would be checked out on instruments and one could hope, perhaps, they would be available and at the place where the Geiger counter was stored at the time the bomb struck.

Properly calibrated Geiger counters are expensive. Small types are in the process of being tested, but none are recommended at present. The expenditure of thousands of dollars for monitoring instruments, in view of the relative low point on

Fig. 5. Progressing disintegration.

the scale of Civil Defense needs, is not justified.

The only possible need for monitoring units at this stage would be for psychological purposes and for determining areas containing 100 or more roentgens of residual radiation. The rapid disintegration of residual radiation makes rescue operations at an early hour quite feasible. After all, in total war, certain calculated risks must be taken.

What are the questions that arise covering the thermal effects of nuclear explosions? Before I develop this subject fully one should remember that the reports in existence are not wholly based on facts. It was originally heard that because of residual radiation, should Chicago be bombed, no person could live there for thirty years. It is known that this is false. One was told that when he saw the flash of light from an atomic air burst he could "duck and cover," and not be burned . . . at least, not severly so. This is false and the Federal Civil Defense Administration was so notified in June of 1952. The film "Duck and Cover" has

never been withdrawn from circulation or repudiated.

Standing on News Knob, seven miles from the explosion, one saw, first, the brilliant white light but simultaneously, one felt the heat on his face. When one sees the light he has had it. Duck into a deep hole to escape the falling and flying debris which will follow seconds later.

After witnessing a test, doubt as to whether a city will burn, as is so often stated from Japanese reports, exists in my mind. Figures 1 through 8 show the damage to the house located about three-fourth miles from Ground Zero at Operation "Dooms Town." In figure 2, that part of the house facing the explosion is on fire. In figure 3, the fire has been extinguished by the blast. The remaining photographs show that the blast destroys the house but it does not continue to burn.

We have been told that Hiroshima and Nagasaki burned because of secondary fires caused by short circuits of electrical wiring and over-turned cook stoves. Would a similar holocaust result in a city of the United States? Fires do not follow in the wake of tornadoes. Houses are dislocated from

Fig. 6. Progressing disintegration.

their foundations and scattered over the countryside. There are short circuits of electrical connections and ruptured gas mains, yet no fires occur. In answer to this argument, it has been stated that in a tornado one has a prolonged wind; in an atomic explosion, the blast is of short duration. But at the end of a tornado, there is still terrific damage, but no sustained blast.

It seems to me there must be another answer. In Japan the density of population is greater—several houses located in an area no larger than the plot on which one of our city homes is located. These houses for the most part have a specially treated paper at the windows instead of glass. The construction is flimsy. The electrical wiring is not subjected to rigid inspections such as in the United States. Nearly twenty-four hours a day, open fires are maintained in the homes consisting of coal, wood or charcoal. Charcoal, in particular, is fanned into a flame by air currents. Were not, therefore, the fires of Nagasaki and Hiroshima due more to flimsy construction of the homes, open fires and primitive electrical wiring and connections?

In any event, from the tests carried out at Operation "Dooms Town" it was learned that the Federal Civil Defense Administration should be provided adequate funds for further research and

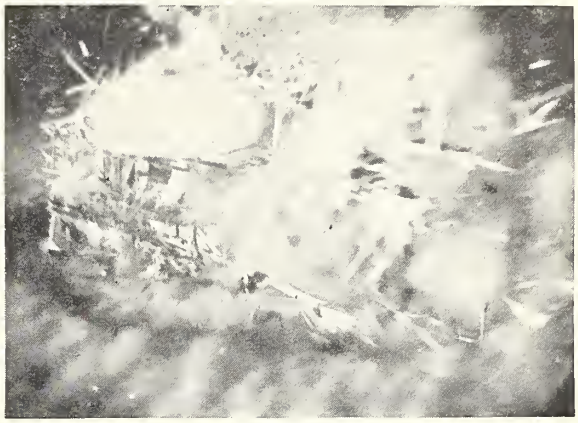


Fig. 7. Progressing disintegration.

development. A proper research project would be the construction of four houses, one with electrical wiring only, one with gas heat only, one with gas heat and electrical wiring and the other having open charcoal fires or other combustible material similar to that commonly used in Japan. A gasoline storage tank should also be exposed to the effects of the heat and blast.

The blast of a nuclear explosion produces bizarre effects and cannot be precisely evaluated. Reports from interviews of those who witnessed the explosion in Nevada on March 17, in many instances appear to be based upon a hysterical reaction of the individual. One observer reported in the *Las Vegas Examiner* that his shoe was blown off by

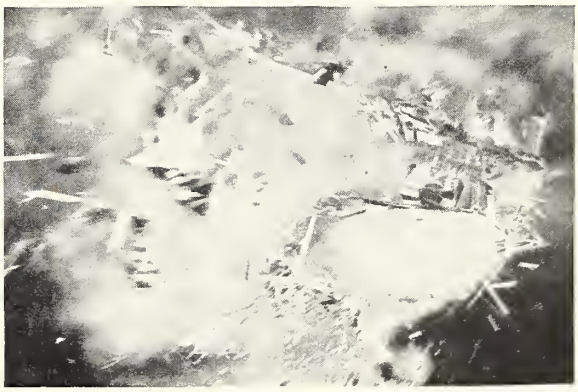


Fig. 8. Progressing disintegration.

the blast. A female observer reported in the press that she felt as if she were "spun around like a top." I sincerely feel that both statements are erroneous. On News Knob, seven miles from the explosion, no one felt a blast effect. If by any

chance they did, it was of such insignificant intensity that it was certainly not experienced except by an extreme minority which raises the question of whether or not they did not report what they had anticipated, and not what they actually experienced. Personally, I felt no effects from the

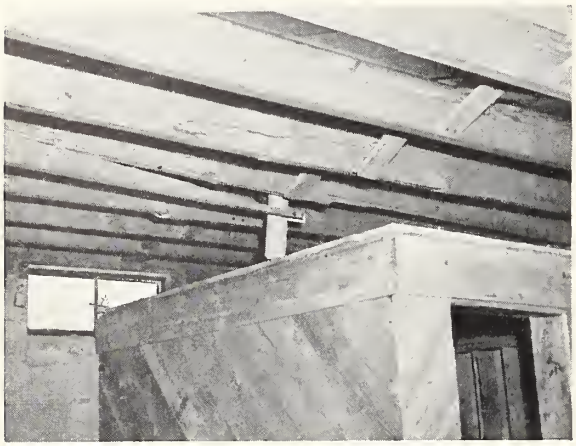


Fig. 9. Square shelter in basement of FCDA house No. 2 at 7,500 feet from ground zero after the atomic detonation on March 17, 1953. Note cracked beams above shelter.

second blast which was a much larger shot. Believing that I would feel quite a concussion from the second heavier shot, I crouched behind a huge boulder on News Knob and was quite disappointed when the sound of the second blast was even less severe than that from the first, but much smaller, explosion.

The blast effect on the houses, even the one located three-fourth miles from Ground Zero was not as great as from a tornado. The house was collapsed on its foundation and dislocated, perhaps

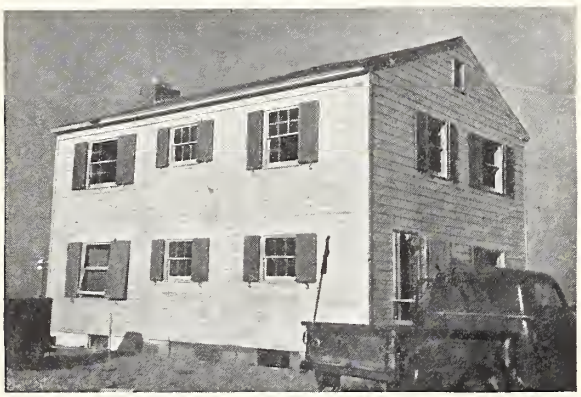


Fig. 10. Rear view of the FCDA house No. 2 at 7,500 feet from ground zero after the atomic detonation on March 17, 1953.

one-third of its width, to the rear. The house was not blown over the countryside. I feel the reason for this is that the blast has tremendous power but is exerted in fractions of a second. It is not sustained.

As reported, the basement shelters survived the blast effects of the explosion. However, had the blast piled debris over the outside entrance to the basement and if fire had been a complicating factor, those who survived the blast would have been burned in the basement. Only the southwest corner of the basement had a large enough area exposed for escape. There were no ladders or fire extinguishers available. These would have been essential items if fire destroys the dwelling. It would seem that if shelters are to be built that the backyard concrete block type covered with dirt would be safer than a basement shelter. With a house burning, a mother and her children could escape only if fire extinguishers and ladders were available. If it is necessary to extend an underground tunnel from the basement shelter out into the backyard for a certain exit, then the backyard shelter could more economically be built in the first place.

Atomic weapons of previously known strength are extremely devastating within certain areas. From observations at the recent tests, it does not

Fig. 11. Front view of the FCDA house No. 2 at 7,500 feet from ground zero after the atomic detonation on March 17, 1953.

seem to me that one can continue to say, "one atomic bomb, one city destroyed." Residences five miles from Ground Zero are not going to be blown to bits. Panic stricken citizens need not flee for their lives—after the bomb has struck. If one is in the area of complete or partial devastation after the burst, one will have had it, but others further away need not be overcome by fear of survival. At least until further research has proven or disproven certain questionable effects of the new weapon.

Automobiles near Ground Zero were not crushed as if by a "giant hand." The cars did not burn. Several were overturned, but they were not disintegrated. Only cars with the windows closed received a dent in their tops. If one hit a lamp post, a car would receive greater damage.

If we are to plan realistically for atomic disaster, we must know the truth. Fantasy and horror reporting serves only to fill the mind with fear and terror which, in time of emergency, will lead but

to panic. Apathy or fatalism may prevent adequate preparedness.

Civil Defense must be considered an arm of National Defense. Proper logistical support of the military establishment can mean the difference between victory and defeat. If atomic bombs are most effective over defenseless cities, then we must protect these cities. Our greatest strength lies in our productive capacity. Destroy our transportation facilities, our factories producing weapons, food and clothing and, automatically, we destroy the logistical support needed by our military forces. Death on the vine could result. Adequate funds for research and development for Civil Defense from a proportionate share of National Defense Funds seems essential. Effective laws for the utilization of civil personnel and the correct administration of the Civil Defense Program would appear vital to the support of our military forces.

It is of vital concern to the medical profession and ancillary groups to know the answers to some of the questions raised concerning the effects of blast, fire and radiation. These effects of the bomb produce casualties. We are concerned with the number of casualties. We must be able to anticipate our problem and handle first things first. We must be able to allay the fears of the people for they look to the medical profession for leadership and adequate medical services during times of disaster. We must, therefore, use our influence to see that adequate funds for research and development are provided the Civil Defense Administration and that we, as physicians, know the results of special tests. A committee of informed physicians should assist in the evaluation of future experiments. This job should not be left entirely to public relations personnel. The press, radio and television should not evaluate the medical hazards of atomic weapons, nor should this be left entirely to mathematicians and nonmedical scientists.

Atomic weapons are with us to stay. We must learn to live with the ever-present possibility of atomic warfare. There is protection against the new weapon. We also must remember that England was saved through the efforts of her Civil Defense battalions when conventional bombs were used.

Opinions stated are those of the author and not the official opinion of the Navy Department.

934 Argyle Building
Captain (MC), USNR
Senior Medical Officer
U. S. Naval Air Station
Olathe, Kansas

"As I wrote to you on January 6, the financial problems of the medical schools should be solved through private rather than governmental means. Excessive reliance on government violates the essential element of our free enterprise system. It falls then on American business to assume a greater share of responsibility for maintaining the institutions essential to our national health.—*Secretary's News Letter*, Letter to Mr. S. Sloan Colt, President, National Fund for Medical Education, and signed, Dwight D. Eisenhower.

GOOD PHYSICIANS, GOOD CITIZENS

GEORGE S. BENSON
President, Harding College
SEARCY, ARKANSAS

A FEW MONTHS AGO I sat with 600 men at a statewide meeting in Little Rock. It was the annual meeting of a ten year old organization dedicated to stimulating economic progress in Arkansas. When all the honor guests had been introduced, the Chairman said he wanted to introduce "one more man." He introduced Dr. H. King Wade, of Hot Springs.

"I happen to know," said the Chairman, "that Dr. Wade is one of the busiest men in Arkansas. He has a busy clinic in one of the best known health centers of the nation. He's a board member in a dozen civic, fraternal and religious organizations that make constant demands on his time. He's a rabid golfer and sportsman. And he's a devoted family man. Yet he has never missed a meeting of our organization in spite of the fact that, for him, it means a whole day away from home and business. I think he typifies the highest qualities of citizenship."

So do I. Besides the time and energy and money he puts into civic work, he is active in state and national affairs, he gives generously of his time and skill to the poor, contributes substantially to all worthwhile projects, and has a reputation for being "reasonable" in his professional fees.

The practice of medical science is an exhausting and demanding responsibility. It actually requires dedication of a man's life. In our student body of 700 at Harding College we usually have enrolled about 100 young men studying for the ministry. I tell them that if they do not feel a deep dedication in the service of humanity they will not be good preachers. To a lesser degree that holds true too for doctors. The Hippocratic Oath has in it the essence of Christ's teachings. It ordains physicians in the healing arts as God ordains ministers of men's souls.

There is still another sacred responsibility given to physicians, ministers and men and women of all callings and walks of life. It is set forth in the two great American documents—the Declaration of Independence and the United States Constitution. The philosophy of community life and the structure of government which these two immortal instruments set up place upon all citizens who enjoy freedom under them a grave responsibility. In the half century just ended most have shirked that responsibility. But freedom is not free. It was not free for the men at Lexington. Nor has it been free for tens of thousands of American soldiers in Normandy and on T-bone Hill in Korea.

But what really is the price of freedom for the man or woman who is not called to the battle front? Today the price of freedom for these fortunate people is active citizenship. It is not paid

for easily. It requires sacrifices of time, effort, money.

No physician is a good citizen who does not practice citizenship.

What are the requirements, then, for the physician-citizen?

First, understand the fundamentals of the American way of life. Here they are:

1. Private property. This is the keystone of our system. It permits individuals to own and utilize personal and corporate property. It is the economic and social principle upon which human right and human progress must be built. Without the right of individuals to own property we would have a domain of public property—a government owning all. Any infringement of this right is dangerous.

2. Freedom in the market place. This freedom permits you to buy from the lowest bidder and sell to the highest. The collective desire of the consuming public for goods, the amount of money each consumer has, and the availability of the desired product, together determine the price in the market place. In the free market the consumers are the bosses.

3. The natural law of incentive. This law is at work in everything human beings do. It cannot be killed even under dictators nor by Socialism, though in both cases its great force for good is much weakened. Profit is an incentive. So is wages.

4. Competition as the spur, the spice of life. In our American system, the major benefits of competition go to the consuming public. A Henry Ford tries to build the best automobile in the light car field. Chevrolet and Plymouth try to give a bigger dollar's worth than Ford. As a result, year after years the buyers get bigger values in all three cars.

5. Freedom of employees. Only free employees have the incentive and the initiative to long maintan high productivity. And freedom for employees can prevail only under a privately owned economy, as England's failure has proved during the past seven years.

6. The umpire in our economic system is the structure of law, created under provisions of the Constitution, and administered by government—law to safeguard the freedom of the individual, the freedom of competition, the freedom of the market place. So long as there are imperfect people there will be transgressions, one against the other. In our system we have laws penalizing the transgressors, the greedy and the scheming; and giving freedom and initiative to the fair minded.

It is not enough to know all this. The physician citizen must know as much, too, about the theory of Socialism and its fallacies, and the philosophy of Communism and its highly dangerous tactics. The threat of socialized medicine is but one tentacle of the Socialist-Communist menace that already has engulfed most of the earth's population. Physicians must recognize this fact. A government can nationalize the medical profession through the back door if it can gain control of any large segment of American business or industry, or if it can gain control of our educational institutions. So the fight of the physician against nationalization, or socialization, should not be waged on a narrow front but on the broad front, against any and all encroachment on private property or individual freedom.

The physician citizen has a grand opportunity to attract community support for private enterprise by the manner in which he conducts himself as a private enterpriser. A physician charging exhorbitant fees—and there are some, just as there are some greedy merchants and industrialists—is a detrimental advertisement for free enterprise. One whose fees are reasonable is not only a good showcase advertisement but he has the intimate confidence and good will of his patients and his opinions are accepted, his influence is strong and far-reaching. He's a good salesman for the American way of life.

The physician citizen who is dedicated to his mission will find time, in spite of the heavy demands of his profession, to take an active part in community affairs. The organization which has drawn the active participation of Dr. King Wade has helped to bring industry to Arkansas in such numbers that the per capita income of the 2,000,000 citizens has increased from $252 in 1940 to nearly $1,000 today—a national record of improvement. Every man and woman, every boy and girl in the state has benefitted. There are similar opportunities in every community, in every state.

In short, the physician citizen practices medicine as a dedicated service to the sick and practices citizenship to make a better life and to secure liberty for all.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

E. R. SQUIBB & SONS 745 FIFTH AVENUE, NEW YORK 22, NEW YORK

Dear Doctor:

℞

Tolserol Tabs. 0.5 gram

Disp. #100

Sig: One tablet 3 to 5 times a day. Take after meals or with 1/3 glass of milk.

Usually Inadequate

This prescription is typical of many written for Tolserol Tablets*, as seen in a recent prescription survey.

Although some patients will respond to such low dosage, much better results can be obtained by following the recommended dosage: 1 to 3 grams, 3 to 5 times per day.

In accordance with this recommendation, the first dosage schedule for a patient could be:

℞

Tolserol Tabs. 0.5 gram

Disp. #100

Sig: Two tablets 3 to 5 times a day. Take after meals or with 1/3 glass of milk.

Better

Complete information on the use of Tolserol in muscle spasm of rheumatic disorders, neurologic disorders, and acute alcoholism is available from your Squibb Professional Service Representative.

Sincerely yours,

L. H. Ashe

L. H. Ashe, Manager
Professional Service Dept.

'TOLSEROL' IS A REGISTERED TRADEMARK

*Squibb 'Mephenesin'

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

Our Neophytes—Changed Concepts?

As the June crop of medical graduates in the United States leave their respective ivory towers, certain broad trends are definitely discernible. During the recent past, applications for entrance into medical schools throughout the country surfeited the openings available. Roughly, in a 5 to 1 ratio, medical schools were inundated with applications beyond the potential numbers which could be trained. Undoubtedly, a great segment of this apparent disparity was due to multiple applications. But, in part, there has been an absolute decrease in those who desire to take up medicine, if this data be a sound criterion.

There are many reasons for this marked diminution. Everyone probably has a different idea. And, undoubtedly there is a bit of truth in each of these, with no one particular reason contributing more than a minor element to the entire picture.

In addition to this reversal, there is a discrete change, observed in the students, concerning specialization. Just a few years ago, it was not unusual to find a class with perhaps three quarters of its members who planned on being specialists; now the tables are turned. A recent personal interview with a newly graduated physician, revealed that his faculty advisor virtually frowned on him (and the other three members of his group) when all stated they were going to do general practice. The faculty man could not understand this change, although he had noticed it in the last few classes. We believe this is healthy; but whether we like it or not, this changed philosophy is in the air.

A recent speech by a professor of surgery decried and desparaged this tendency, together with the fact that his department was having trouble filling vacancies for residents and assistant residents.

Perhaps this famous surgeon is right; maybe he's wrong! As it looks from here, one need not suggest de-emphasis in specialized or higher training. Probably, the pendulum has swung too far and is now swinging back toward a saner, more solid ground.

Let there be researchers, teachers and the intelligentsia in our profession, each a colossus in his sphere. But let there be also a wise balance of those who merely treat sick folks. Once upon a time, that was what a doctor was supposed to do —and we still think so!

VINCENT T. WILLIAMS, M.D.

Paget: Surgeon-Philosopher

Sir James Paget (1814-1899) was a man to admire. Not only because he first described osteitis deformans and the disease of the nipple that bears his name, but also because he was a fine speaker and a writer of charming philosophy. In *St. Bartholomew's Hospital Reports* he once wrote on "What Becomes of Medical Students."

The careers of 1,000 of his former students being known to him, it was of these that he wrote in his essay. "Of the thousand," he stated, "23 achieved distinguished success; 66 considerable success; 507 fair success; 124 very limited success; 56 failed entirely; 96 left the profession; 87 died within twelve years of commencing practice; 41 died during pupilage." Paget's criteria of success are of interest. ". . . they are classed as having achieved distinguished success who, within fifteen years after entering, gained, and to the end of the time maintained, leading practices in counties or very large towns, or held important public offices, or became medical officers of large hospitals, or teachers in great schools, as the Professors of Anatomy in Oxford, Cambridge, and Edinburgh, all of whom it was my singular good fortune to have for pupils."

He placed great stock, apparently, in the holding of public office, because in the gradations of his

standards of success, the height which one attained in "appointments in the public services" constituted a mark of considerable merit.

"They who failed entirely were a very mixed class," he continued, "agreeing only in their total want of success. Of the 56 who made up the gloomy total, 15 were never able to pass examinations—some because of idleness or listlessness, a very few through sheer want of intellect."

His closing paragraph points the moral of the entire essay. "In remembering those with whom I was year after year associated . . . nothing appears more certain than that the personal character, the very nature, the will, of each student had far greater force in determining his career than any helps or hindrances whatever . . . The time and the place, the work to be done, and its responsibilities, will change; but the man will be the same, except in so far as he may change himself."

Jerome I. Simon, M.D.

Half Truth

The enemies of organized medicine have used many tactics. One is partial truth. This has the innocent appearance of whole truth.

A favorite theme of the previous administration was that in the draft for World War II, four and a half million men were rejected. This is true as a statement. But when these figures are used as an indictment of our system of medicine, something false has crept in.

When rejections because of illiteracy, congenital diseases and congenital deformities have been deducted, an entirely different picture is seen and our present system of medicine emerges as triumphant —and at this point we have not taken into account repeated examinations of cases of herniae and such (which were counted each time—and which were finally accepted, put into service and operated upon).

This unscrupulous handling of the "truth" is very iniquitous. Much of the tall talk today about difficulty in getting a doctor under "emergency conditions" is of the same nature. If each case were scrutinized and circumstances considered, there very often would be a different picture. Frequently the difficulty is caused because a patient or the patient's family want a busy doctor to fit his schedule to their social calendar. A lady calling for an appointment can't come to the office in the morning because she has to meet a friend in town and she can't come in the afternoon because she has to play bridge. If the doctor has no other available time, the patient has been "unable to get a doctor." She will wail loud, long and frequently.

Francis T. H'Doubler, M.D.

Physicians and Military Service

Not long ago I received a request from a Physician's Veteran's organization to support a movement to our congressmen to force in effect the utilization by the draft of older physicians, particularly those who had not served in World War II.

I received the impression from this communication that the Armed Forces were reluctant to take the physicians between 40 and 51 because (a) they would receive advance rank commensurate with their age and professional experience, (b) due to their age they were difficult to indoctrinate into military life, and (c) the Armed Forces were trying to limit the maximum age of Medical Military Draft to 40 years of age.

I have been advised by the Department of Defense that under regulations prescribed by the Selective Service System, the call-up of physicians in the Priority III group has been in accordance with age, the youngest being called first. This policy has been spelled out in proposed revisions to the law. Apparently the Medical Veterans want this manner of call-up changed so that the oldest will be called first. While the attitude of the Department of Defense has not been established in this regard, the obvious need of young men, physically able to serve with field medical units, precludes any change in this policy.

Some of us feel that it is high time that the Veterans stop trying to tell the Armed Forces how to run the show—and stop bellyaching about the physicians who didn't serve in World War II. The Armed Services are not going to call you unless they need you—and if they do, after all it is your country!

Avery P. Rowlette, M.D.

Medical Travelogues

There is much benefit to be derived from visiting medical centers and from attending medical meetings. I have spent much time in the last twenty-five years in the operating rooms of the various centers in this country and elsewhere. . . . I have received much of value from the many medical meetings I have attended over these years.

. . . Medical meetings offer a similar opportunity for expansion of your contacts and afford an opportunity of individual appraisal. One learns a great deal by personal contact and exchange of ideas and opinions. These contacts are a satisfaction and an inspiration that cannot be obtained by any other means. They are worth many times the cost and pay big dividends from the point of view of professional advancement.—Claude J. Hunt, M.D., *Jackson County Medical Society Bulletin.*

Fraternally Yours

Notes from the Annual Meeting

Against a background of mock air-raid conditions (the Civilian Defense boys picked on Sunday, too), the Ninety-fifth Annual Session of the Missouri State Medical Association got under way. Between the reverberations of low-flying jets, the banshees of the ambulances and firetrucks, some fairly important business was transacted.

Our Executive Council started off early on Sunday and by noon had knocked out a fairly healthy agenda. The registration started soon after noon, and the first House of Delegates meeting was called around 2:00 p.m. At this session, J. William Thompson, M.D., the retiring President, made an address, and E. Claude Bohrer, M.D., the President-elect, presented his views on actions which should be taken during the coming year. There were numerous reports from the various committees, and other official business, such as appointment of committees.

The ladies of the Auxiliary were busy in a similar manner Sunday afternoon, in what they called the Pre-Convention Executive Board Meeting.

In the evening, the Auxiliary staged a buffet supper, with the avowed purpose of having fun and food. Plenty of both were in evidence in the few minutes we were there with the photographer. Actually, they had a tremendous, overflow crowd and, from reports we received, it was a most enthusiastic gathering.

This reporter spent more time on Sunday evening at the Presidents and Secretaries Dinner. At this gathering there was a smaller crowd, with less emphasis on conviviality. The guest speaker was Bill Vaughan, Starbeams Editor *(Kansas City Star)*. He is well-known to many Missouri physicians, not only because of his column in the *Star*, but also because his father was a well-known St. Louis physician, as is his brother.

Vaughan's topic was the much belabored issue of public relations and, as usual, he brought a new and fresh viewpoint in his message. We hope to reprint the entire speech in Missouri Medicine. The nugget of his speech, however, is relatively simple: The essence of good public relations is a composite-resultant of good public relations between each individual physician and his patients. It is well to use press-agentry, opines Vaughan, but if the people are sore at their own physicians, no amount of ads in the papers and billboards will make them happy. A practical, down-to-earth philosophy.

After such an auspicious opening, on the nonscientific aspects, on Monday morning a fairly good crowd turned out for the scientific presentations. Undoubtedly, most of the papers will be presented in Missouri Medicine. As usual, Monday's program was something like a three-ring circus, with chest diseases and obstetrics competing for an audience. The noon luncheon was well attended, and the participants were effective. The afternoon general scientific meeting again combined interesting presentations with a larger audience.

On Tuesday, somewhat the same routine was followed, metabolic diseases and pediatrics vying in the morning, with the round-table luncheon followed by a general meeting in the afternoon. Again, most of these scientific presentations will be published.

The Tuesday night banquet (Annual Banquet in Honor of Past Presidents), is always a highlight of these annual meetings. At these events the Past Presidents are recognized, fifty-year pins awarded, the President and President-Elect make their addresses. Claude J. Hunt, M.D., President of the Jackson County Medical Society, welcomed the guests in an address. The featured speaker, Allan B. Kline, President of the American Farm Bureau Federation, could not be present, but his substitute, Charles B. Shuman, did a creditable job in discussing the inter-relationship and the common purposes of many groups (including farmers and physicians) in attempting to prevent centralization and bureaucracy from destroying our liberties, even in a democracy. We believe this was a stimulating and forceful evening with such talented speakers, both medical and nonmedical.

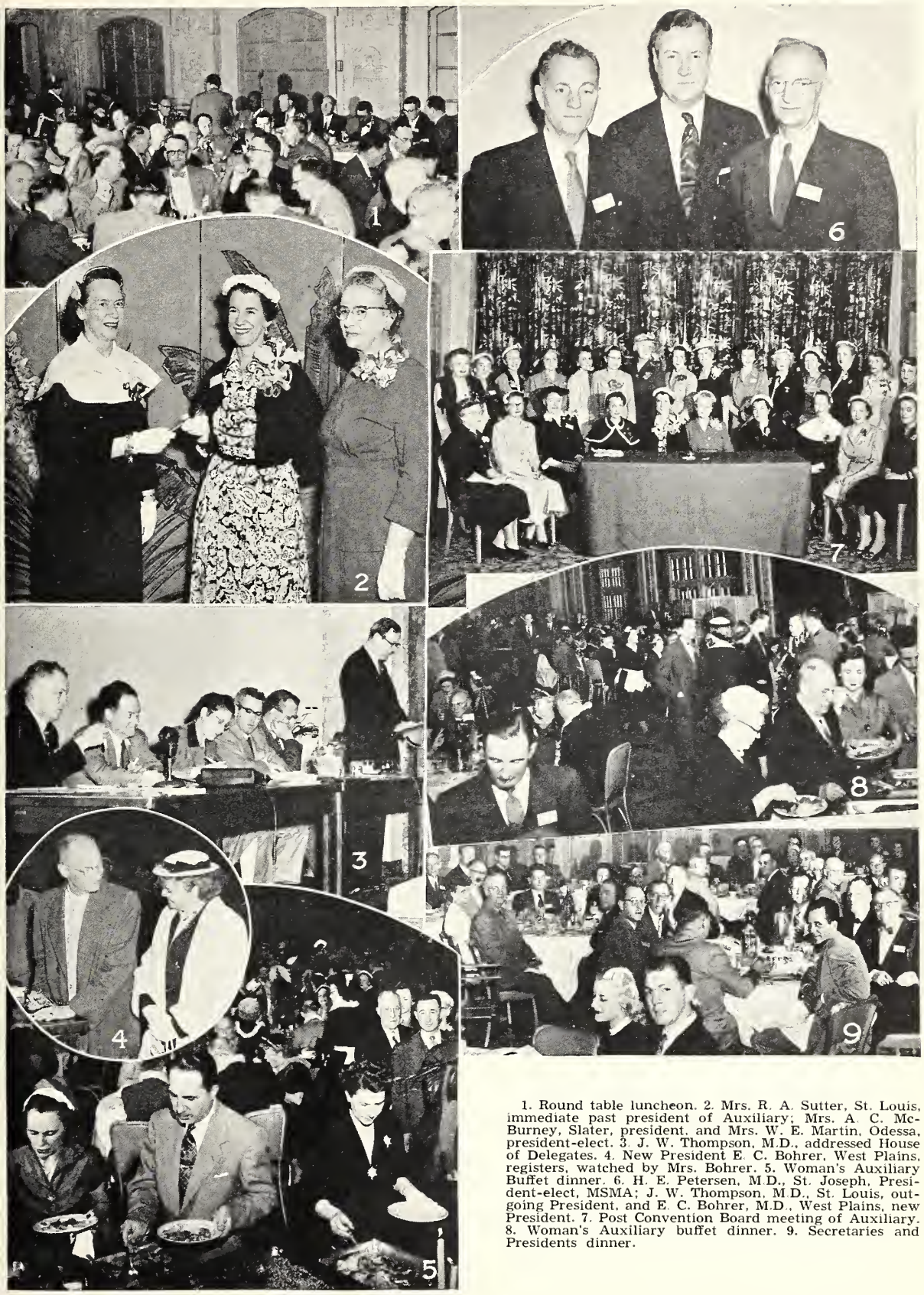
More scientific presentations Wednesday, and there you have it. Of course, the House of Delegates met again Monday afternoon, again on official business of the Association, and held their last session Wednesday afternoon.

There were some brief exhibits of fireworks in the making in the "deliberations" of the House of Delegates. You will read of these later as official action; others died a-borning—probably you won't read of those.

H. E. Petersen, M.D., St. Joseph, was elected President-elect; E. Royse Bohrer, M.D., Jefferson City, was elected Secretary, and Carl F. Vohs, M.D., St. Louis, was elected Treasurer. Two new councilors were elected, Otto Koch, M.D., from St. Louis County,, and C. G. Stauffacher, M.D., Sedalia. Otherwise, the councilors remain the same as last year, with Victor Buhler, M.D., Kansas City, again elected Chairman.

Despite the slight decrease in the registration, everyone seemed to feel this was a good meeting, with a proper balance between the strictly scientific, social and business phases.

—V. T. W.



1. Round table luncheon. 2. Mrs. R. A. Sutter, St. Louis, immediate past president of Auxiliary; Mrs. A. C. McBurney, Slater, president, and Mrs. W. E. Martin, Odessa, president-elect. 3. J. W. Thompson, M.D., addressed House of Delegates. 4. New President E. C. Bohrer, West Plains, registers, watched by Mrs. Bohrer. 5. Woman's Auxiliary Buffet dinner. 6. H. E. Petersen, M.D., St. Joseph, President-elect, MSMA; J. W. Thompson, M.D., St. Louis, outgoing President, and E. C. Bohrer, M.D., West Plains, new President. 7. Post Convention Board meeting of Auxiliary. 8. Woman's Auxiliary buffet dinner. 9. Secretaries and Presidents dinner.

1. Past Presidents at Annual Banquet. 2. Mr. Charles B. Shuman addresses banquet audience. 3. Annual Banquet. 4. Dr. Thompson handles gavel for last time. 5. Past Presidents at Annual Banquet. 6. Men receive 50 Year Pins at banquet. 7. Speakers table at banquet. 9. Dr. Thompson admires Past President's key presented by Dr. Bohrer. 8. Annual Banquet. 10. Claude Hunt, M.D., Kansas City, welcomes banquet audience.

Missouri Medical Meetings

Sept. 27-Oct. 1: Kansas City Southwest Clinical Conference, Municipal Auditorium, Kansas City.
Oct. 28-29: Missouri Academy of General Practice Annual Meeting, Hotel Governor, Jefferson City.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

A good number of interns and residents of the Kansas City hospitals accepted the invitation to attend the 1953 Annual Session and were present at various sessions. Medical practice locations over the state were discussed with a few of them during the meeting.

The three-dimensional surgical films shown on the last day of the Annual Session drew large audiences —maybe curiosity was a factor; if so, more meetings might well add curiosity-arousing features to their programs.

The formation of new hyphenated county medical societies form the following groups of counties: Butler-Ripley-Wayne, Bates-Cass-Cedar-St. Clair-Vernon and Phelps-Crawford-Dent-Pulaski-Maries is expected to be completed soon.

Two new fifty bed county hospitals recently have begun operation. The Lincoln County Memorial Hospital at Troy began receiving patients in April with the Sullivan County Memorial Hospital at Milan doing likewise in May. Thousands of people visited these two splendid institutions during their respective periods of open house. If hospitals are an attraction for physician location these two new models should serve as strong magnets.

The annual spring meeting of the Missouri Health Council was held at the Governor Hotel, Jefferson City, on May 4. "Nurse Recruitment and Training" was discussed from both the viewpoint of the nurse and the hospital administrator. Among other things it was pointed out that keeping nurses actively in the field of nursing is a big factor in the recruiting and training picture and that some physicians might be of more help in this matter if they treated nurses with more respect and consideration.

Senator A. M. Spradling, Jr., Cape Girardeau, Chairman, Senate Committee on Health and Welfare, discussed a number of important health bills introduced in the Missouri General Assembly during the present session.

Your Patients Read

"Sterility Can Be a State of Mind," *Coronet*, April.
"Pills Are Getting Smarter," *Colliers*, March 14.
"New Blood Substitutes End Risks of Plasma," *Look*, April 21.
"You Should Know All This About Cancer," *Ladies Home Journal*, April.
"What Doctors Know About Eyestrain," *Everybody's Digest*, May.
"Could You Be a Secret Tuberculosis Victim?" *Woman's Home Companion*, April.
"What's Behind Your Headache?" *Parents' Magazine*, April.

Members in the News

An honorary membership in Alpha Delta Gamma Fraternity (Zeta Chapter, at Rockhurst College, Kansas City) was awarded **Timothy S. Bourke**, M.D., by Peter J. Vandenbergh, Jr., Chicago, Fraternity national President on April 12.

"Management and Treatment of Common Fractures" was the title of guest speaker **Otis E. James, Jr.**, M.D., Kansas City, at the Clay County Medical Society Meeting, March 31, at Liberty.

Ralph Emerson Duncan, M.D., Kansas City, was the guest speaker of the Boone County Medical Society on April 7, at Columbia. He spoke on "Alcoholism." In the afternoon at 4:00 p. m., Dr. Duncan, by invitation addressed the faculty and students of the University of Missouri School of Medicine.

At the regional meeting of the International College of Surgeons, in St. Louis, April 1, **Claude J. Hunt**, M.D., Kansas City, presented "Controversial Thyroid Problems." He also presided as President at the meeting of the American Goiter Association in Chicago, May 7 to 9.

Harold L. Gaincy, M.D., Kansas City, recently was elected Secretary-Treasurer of the Central Association of Obstetricians and Gynecologists.

The Paris, Missouri, Progressive Club honored **George M. Ragsdale**, M.D., at a jubilee on April 10. According to the press, "Dr. Ragsdale, one of the few remaining country doctors in this section, was honored for many years of unselfish service to the thousands of Monroe County persons who have come to love him as friend and physician. He was presented a framed scroll bearing the inscription, 'with the love and affection of the people whom he has served.' "

The April *Southern Medical Journal* carried an article, "Long-Acting Intercostal Nerve Block" by **Robert W. Bartlett**, M.D., and **Douglas W. Eastwood**, M.D., St. Louis. Their article describes experiences with the long-acting anesthetic, Efocaine R, in the postoperative treatment of patients with consistently impressive results.

A rapid, fairly long lasting, and dependable treatment of post-spinal headaches (from saddle-block anesthesia) is described in *American Journal of Obstetrics & Gynecology* by **Robert I. Pfeffer**, M.D., St. Louis County Hospital. The method, effective within 30 to 60 minutes, consists of the buccal administration of 2 mg. desoxycorticosterone acetate every four to six hours.

Apparently a superior gall-bladder dye, Telepaque, is recommended by **Wendell G. Scott**, M.D., and **Wayne A. Simril**, M.D., St. Louis. Their observations in *The American Journal of Roentgenology* indicate that the new dye is considerably more dependable than earlier dyes, and produces fewer side reactions.

Chief of Surgical Service, V. A. Hospital, Kansas City, **George A. Higgins**, M.D., is coauthor, with Richard D. Rider, Wichita, of a case report in the March *American Surgeon*. They describe a bleeding gastric ulcer necessitating partial gastrectomy in a patient on prolonged cortisone therapy. While no conclusions are drawn, they point up the need for cautious use of the drugs in potential hemorrhage patients.

New president of Perry County Memorial Hospital Staff is **William Utterman**, M.D. **L. W. Feltz**, M.D., is vice president and **J. J. Bredall**, M.D., secretary.

The Princeton Chamber of Commerce honored **J. M. Perry**, M.D., on the completion of fifty years of practice.

Top-level officers of the Radiological Society of North America, recently elected at the 38th annual session of that organization, are both from Kansas City: **Ira H. Lockwood**, M.D., President, and **C. Edgar Virden**, M.D., Director.

The National Convention of Phi Beta Pi at Birmingham heard an objective and illuminating discussion of "Internships and Residencies in Army Hospitals" by Brig. Gen. Paul I. Robinson, currently Commanding General Fitzsimons Army Hospital, a graduate of Washington University Medical School in 1928.

Guests attending the Mid-West Proctologic Society meeting in Springfield in mid-April included **Frederick B. Campbell**, M.D., and **George H. Thiele**, M.D., Kansas City. The group was professional-social guests of **Ronald F. Elkins**, M.D., Springfield, in a two day meeting.

On vacation to Honolulu, with stopover in Los Angeles for American Psychiatric Association meeting, Dr. and Mrs. **G. Wilse Robinson, Jr.** left Kansas City April 5. They will also attend a meeting of the National Association of Private Psychiatric Hospitals, of which Dr. Robinson is president.

A portrait of **Sam E. Roberts**, M.D., Kansas City, was unveiled in the library of the University of Kansas Medical Center early in April. Dr. Roberts has been continuously associated with the University since 1913.

Proceedings of the Mid-Continent Psychiatric Association meeting in Kansas City late in March were recorded by Secretary-Treasurer, **Paul Hines**, M.D. **Louis H. Forman, M.D.**, Kansas City, participated in the discussions.

As a result of confounding the judges of original articles in the Cape Girardeau *Journal*, awards were given to **L. R. Seabaugh**, M.D. ("A Review of 500 Prostatectomies"), **Frank Hall**, M.D. ("Varicose Veins"), and **T. G. Otto**, M.D. ("Management of the Critically Injured in Highway Accidents"). Judging committee

Chairman **Carl V. Moore**, M.D., St. Louis, wrote to Editor **D. R. Seabaugh**, M.D., that ". . . it is obvious that all of you are setting high standards of medical practice, and certainly you are to be warmly congratulated individually and as a Society."

Biennial registration applications have been sent to physicians in Missouri. Any physician not receiving the application form should contact the Board of Medical Examiners, Jefferson City. The registration fee was raised by the General Assembly, with the approval of the House of Delegates of the Missouri State Medical Association at its previous annual session.

Robert M. Myers, M.D., Kansas City, spoke May 12 to a dinner meeting of the Missouri Association of Nursing Homes. His topic was "The Place of the Nursing Home in the Community."

Guest speakers at the scientific session of the Kansas City Gynecology Society, held the middle of April in Kansas City, included **Kenneth Cox**, M.D., **Hugh Hamilton**, M.D., **Kenneth S. Nicolay**, M.D., and **Samuel Rodgers**, M.D.

"The Physician's Responsibility in Cancer Detection" was the subject of a talk given before the Buchanan County Medical Society by **Terry E. Lilly, Jr.**, M.D., Kansas City.

The fourth Annual F. G. Thompson Sr. Lecture, sponsored by the Thompson-Brumm-Knepper Clinic, St. Joseph, was May 28. Robert S. Dinsmore, M.D., Chief of Surgery at the Cleveland Clinic, spoke on "Changes in Surgery During the Past Decade."

Greater Kansas City GP Academy members heard a talk with a novel title, "It's Fun to Practice Medicine," by **Edward Hashinger**, M.D., at a meeting May 19.

At a recent scientific meeting of the Allegheny (Pennsylvania) Medical Society, **Evarts A. Graham**, M.D., St. Louis, was introduced as "The Father of Chest Surgery." Dr. Graham spoke on "The Etiology of Bronchiogenic Carcinoma."

M.U. Medical Alumni Association officers recently elected are **Martyn Schattyn**, M.D., St. Louis, president, **Terry E. Lilly**, M.D., Kansas City, and **Pete Siegel**, M.D., Smithton, vice presidents, and **M. D. Overholser**, M.D., Columbia, secretary-treasurer.

At a meeting of the MSMA Auxiliary, **Mrs. C. Alex McBurney** of Slater was installed as president. President-elect is **Mrs. W. E. Martin**, Odessa; vice presidents are **Mrs. Norton Eversoll** and **Mrs. Guy Magness**, St. Louis, and **Mrs. Robert Duncan**, Springfield, and **Mrs. Joseph Fisher**, St. Joseph. **Mrs. Victor B. Buhler**, Kansas City, recording secretary, and **Mrs. Frank B. Leitz**, Kansas City, treasurer, along with auditor, **Mrs. H. C. Bauman**, Marysville, completed the roster of new officials.

New officers of the Jackson County Medical Society are: President-elect, **James A. Jarvis**, M.D.; Secretary, **William B. Cheeseman**, M.D.; Treasurer, **Clifford C. Wilson**, M.D. New member of the board of censors is **Franklin H. Wakefield**, M.D., and new members of the executive council elected are **Carroll P. Hungate**, M.D. and **Harry C. Lapp**, M.D.

A two day meeting of alumni of the St. Louis St. Mary's Group was held in St. Louis early in May. **C. Rollins Hanlon**, M.D., conducted a clinical session on "Surgical Aspects of Mitral Stenosis." Other speakers on the program, from St. Louis University, were **Ralph A. Kinsella**, M.D., **Henry E. Oppenheimer**, M.D., **Walter C. Randall**, M.D., and Washington University associate professor, **Joseph Ogura**, M.D.

"Newer Approaches to Older Patients" was the subject of a Panel Discussion at the Annual Postgraduate Institute in Philadelphia in May. The guest speaker on "Aspects of Vascular Change" was **Albert Lansing**, M.D., St. Louis.

Durward G. Hall, M.D., Springfield, was named a member of the executive committee of Region 8 of the Boy Scouts of America at an annual meeting in Kansas City, Kansas, on April 16.

The Missouri Social Hygiene Association at its annual meeting in St. Louis on April 7 reelected **Paul J. Zentay**, M.D., St. Louis, president.

Everett D. Sugarbaker, M.D., Jefferson City, was the speaker at the opening of the Cancer Crusade in Phelps County at Rolla on April 7.

Moberly's **J. Will Fleming**, M.D., is the new president of the Missouri Heart Association, succeeding **Don Carlos Peete**, M.D., Kansas City. The president elect is **Julius Jensen**, M.D., St. Louis. Other elected officers are **Earl L. Loyd**, M.D., Jefferson City, vice-president; **Walter Baumgarten**, M.D., St. Louis, secretary, and **Harry L. Wuerth** of the Kansas City Commerce Trust Co., treasurer. Speaking to the organization at Hotel President, **James W. Colbert, Jr.**, M.D., St. Louis University Medical School Dean, said, "The heart associations of America should stop at nothing short of wiping themselves out, for heart disease is at the core of medical problems."

At a dinner welcoming **James W. Colbert, Jr.**, M.D., as Dean of the School of Medicine of St. Louis University on April 22, **H. G. Weiskotten**, M.D., Syracuse, New York, spoke on "Rising Standards and Rising Costs of Medical Education."

An Edward Holman Skinner Memorial Fund has been established. The fund will be used to defray the expenses of an outstanding physician to deliver the Edward Holman Skinner Memorial Lecture at the opening session of the Annual Fall Conference of the Kansas City Southwest Clinical Society.

When organisms resist the other

antibiotics . . .

USE ERYTHROCIN*

...especially effective against gram-positive organisms including those resistant to penicillin and the other antibiotics.

USE ERYTHROCIN*

. . . has low toxicity; orally effective against infections caused by staphylococci, streptococci and pneumococci.

USE ERYTHROCIN*

. . . indicated in pharyngitis, tonsillitis, scarlet fever, pneumonia, erysipelas, osteomyelitis and pyoderma.

USE ERYTHROCIN*

...gastrointestinal disturbances mild and relatively rare; no serious side effects reported.

USE ERYTHROCIN*

. . . fully potent; average adult daily dose 0.8 to 2.0 Gm., depending on type, severity of infection.

USE ERYTHROCIN*

...special absorption-favoring coating; 0.1 Gm. (100 mg.) tablets supplied in bottles of 25 and 100. Abbott

*Trade Mark for
ERYTHROMYCIN, ABBOTT

1-178

James W. Colbert, Jr., M.D., St. Louis, Dean of St. Louis University School of Medicine, delivered the annual William H. Vogt Lecture sponsored by the Alpha Mu Chapter, Alpha Kappa Kappa Fraternity, at the University Auditorium on May 7.

April 27 to May 1 the eighth annual convention of the Homer G. Phillips Hospital Interne's Alumni Association met in St. Louis. Aside from the staff members who spoke were **Hilliard Cohen**, M.D., Kansas City, and **Warren H. Cole**, M.D., University of Illinois.

The seventh annual Rocky Mountain Cancer Conference will be held in Denver on July 8 and 9. There will be eight outstanding guest speakers and on the first evening a banquet and entertainment for doctors and their wives will be held. There is no registration fee for the conference.

Adolph H. Conrad, Jr., M.D., St. Louis, addressed the student body and many of the faculty of the Marquette University Medical School, Milwaukee, on "Cancerous and Precancerous Lesions of the Skin" on April 15.

IN MEMORIAM

Motley, Elliot R., M.D., Kinderhook, Illinois, a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1897; honor member of the Marion-Ralls County Medical Society; aged 80; died March 11.

Klippel, Edward T., M.D., St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, St. Louis, 1910; member of the St. Louis Medical Society; aged 71; died March 11.

Reutter, Garfield A., M.D., Rock Port, a graduate of Ensworth Medical College, St. Joseph, 1911; member of the Nodaway-Atchison-Gentry-Worth County Medical Society; aged 69; died April 24.

Pipkin, Walter D., M.D., Monroe City, a graduate of St. Louis University School of Medicine, 1904; honor member of the Chariton-Macon-Monroe-Randolph County Medical Society; aged 76; died April 1.

Marder, Sumner, N., M.D., Takoma Park, Maryland, a graduate of Yale University School of Medicine, 1947; member of the St. Louis Medical Society; aged 31; died April 10.

Harrington, G. Leonard, M.D., Kansas City, a graduate of the University of Kansas Medical School, 1908; member of the Jackson County Medical Society; aged 68; died April 13.

Reim, Hugo, M.D., St. Louis, a graduate of Barnes Medical College, St. Louis, 1904; member of the St. Louis Medical Society; aged 70; died April 15.

McKinney, Ralph F., M.D., Warrensburg, a graduate of St. Louis University School of Medicine, 1928; member of the Johnson County Medical Society; aged 49; died April 20.

Smith, James D., M.D., Kansas City, a graduate of St. Louis University School of Medicine, 1925; member of the Jackson County Medical Society; aged 53; died April 27.

Thieme, Harry L., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1924; aged 53; died April 29.

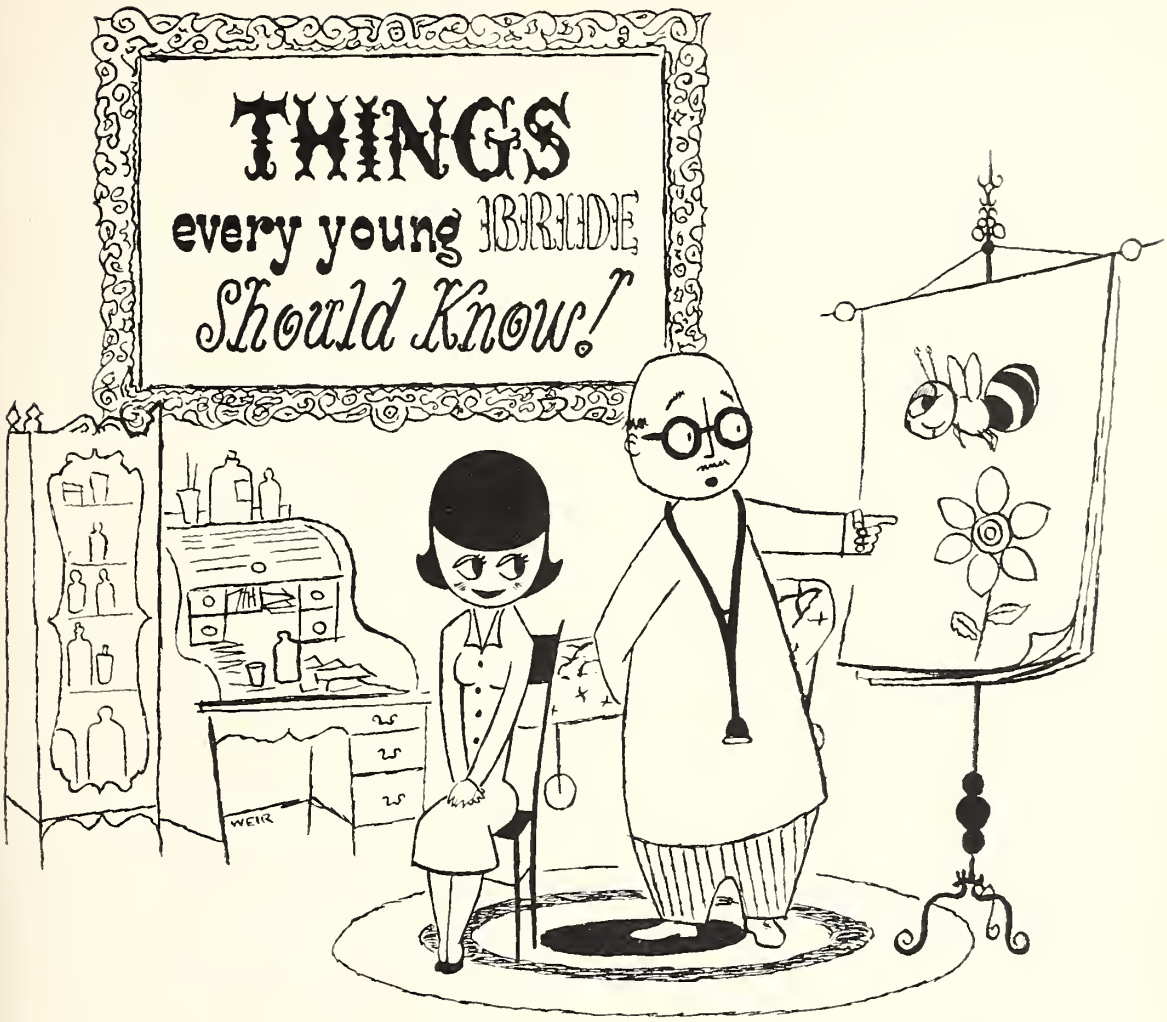
Wachowiak, Marion, M.D., St. Joseph, a graduate of St. Louis University School of Medicine, 1922; honor member of the Marion-Ralls County Medical Society; aged 72; died April 2.

NEW MEMBERS

Austin, Martin G., M.D., St. Louis
Bell, William F., M.D., Lee's Summit
Brown, Daniel W., M.D., St. Louis
Caciappo, Joseph E., M.D., St. Louis
Carleton, Charles E., Jr., M.D., St. Louis
Carlin, Albert L., M.D., Stanberry
Carpenter, Wallace, M.D., Rock Port
Cook, Norman L., M.D., Cape Girardeau
Flynn, Edward P., M.D., St. Louis
Fowler, J. Henry, M.D., Fulton
Healey, Robert J., M.D., St. Louis
Heaney, Robert P., M.D., St. Louis
Henry, Schubert D., M.D., Kansas City
Kilpatrick, William R. J., M.D., St. Louis
Klym, Nicholas, M.D., St. Louis
Lanier, Earl W., M.D., St. Louis
Multhauf, Cyril J., M.D., Kansas City
Nofles, James W., M.D., St. Louis
Payne, Meredith J., M.D., St. Louis
Reid, William F., M.D., St. Louis
Riley, Ralph W., M.D., St. Louis
Robison, James T., M.D., Kansas City
Shifrin, Alexander, M.D., Kansas City
Smith, Vernon L., M.D., San Francisco, California
Stecher, John F., M.D., St. Louis
Zeffren, Joel L., M.D., St. Louis

In very special cases
A very superior Brandy

Specify 84 PROOF
★ ★ ★
HENNESSY
THE WORLD'S PREFERRED
COGNAC BRANDY
For a beautifully illustrated book on the story of Hennessy, write—
Schieffelin & Co., Dept. HT, 30 Cooper Square, N. Y. 54



GOOD advice for every bride . . .and groom, too . . . is to apply *immediately* for family type contract in BLUE CROSS and BLUE SHIELD.

There is a 9-month waiting period for maternity benefits after the change to family membership is in effect, so don't delay.

In Blue Cross, full service benefits in the hospital are provided, not just a flat cash amount. Blue Shield provides substantial assistance toward services of the obstetrician and anesthesiologist.

Together, Blue Cross and Blue Shield make the blessed event a happy event for the family budget. And the new baby is included in the family membership, too, at no increase in cost.

For the best in protection for the whole family, it's BLUE CROSS and BLUE SHIELD!

BLUE CROSS
BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Saint Louis
Kansas City

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Grand River Medical Society

H. E. Petersen, M.D., St. Joseph, President-elect of the Missouri State Medical Association, presented the scientific program of the Grand River Medical Society meeting on May 12 at the Strand Hotel, Chilicothe. He discussed "Acute Abdominal Emergencies of Children."

Members of the Woman's Auxiliary adorned the dinner part of the meeting with their presence.

E. A. Duffy, M.D., *Secretary.*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Lincoln-St. Charles County Medical Society

The physicians of Lincoln County were hosts to members of the Lincoln-St. Charles County Medical Society, members of the Pike County Medical Society, physicians from Warren County and some fifteen physicians from the Greater St. Louis area at a dinner and inspection of the new Lincoln County Memorial Hospital, Troy, on Thursday night, April 9. Open house at the hospital for the general public was held Saturday and Sunday, April 11 and 12. The first patients were received in the hospital on Thursday, April 16.

J. C. Creech, M.D., *Secretary.*

FIFTH COUNCILOR DISTRICT

J. LOREN WASHBURN, VERSAILLES, COUNCILOR

Audrain County Medical Society

A "wet-heart" clinic made up the program at the April 16 meeting of the Audrain County Medical Socity. Members of the Society presented some interesting heart cases for discussion. The discussion was led by James G. Janney, Jr., M.D., St. Louis, and C. G. Vournas, M.D., St. Louis. Drs. Janney and Vournas are members of the Cardio-Vascular Section of the staff of St. Louis University School of Medicine. The program was well received by the Society members present.

Harry F. O'Brien, M.D., *Secretary.*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

South Central Counties Medical Society

The South Central Counties Medical Society met for dinner on March 19 at the Antlers Cafe, Mountain Grove, with the following members and visitors present: Drs. R. W. Denney, S. W. Connor and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; S. G. Kramer, Houston; Leslie Randall, Licking; M. B. Perkins, Willow Springs; E. C. Bohrer and J. M. Wiles, West Plains; L. D. Cady, Rolla, and U. J. Busiek and Percy Luecke, Springfield, and several of the wives.

Following dinner the ladies went to the home of Mrs. Denney for the evening and the doctors went to the office of Dr. Connor where the president, Dr. Kramer, called the meeting to order.

Drs. Busiek and Luecke spoke on "Bronchiolitis in Children," a condition of the lungs only recently recognized, involving the bronchioles. Dr. Kramer expressed the thanks and appreciation of the Society.

It was voted to take Ozark County into the South Central Counties Medical Society.

The meeting adjourned to meet in Cabool on May 20.

A. C. Ames, M.D., *Secretary.*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Mineral Area County Medical Society

Charles Gulick, M.D., St. Louis, spoke at a meeting of the Mineral Area County Medical Society, April 23, at State Hospital No. 4, Farmington. His subject was "Bleeding in the Third Trimester of Pregnancy."

Byron H. Taylor, M.D., *Secretary.*

Others Say

A pharmacist can be of considerable help to the physician, in addition to the . . . filling of prescriptions . . . he is able in many instances to offer drug cost information which will result in cheaper prescriptions for the patient, with no compromise in quality or effectiveness. . . . In return, the physician can, when prescribing expensive medications, forewarn the patient of the probable cost, and the necessity for that particular drug. A few moments so spent will spare the druggist that "I've been robbed" outburst that so often follows the dispensing of a tidy supply of antibiotics.—Charles F. Wilson, M.D., "The President's Message," *Journal Cape Girardeau County Medical Society.*

. . . A general practitioner who tells you that you are suffering from high blood pressure seldom gets more than five bucks. But a Park Avenue specialist who refers to high blood pressure as hypertension charges anything he fancies, from hundred dollars up . . . —"Call Girls and Fall Guys," *Esquire.*

A number of medical societies are sponsoring training courses for doctor's employees. Such employees exert great influence in molding a patient's opinion of the physician and his office. These courses cover the medical secretary's duties and responsibilities, management of the doctor's office, facts about the local and state health departments and other pertinent subjects. Arrangements were made by doctors of the local medical society with a junior college in Detroit so that there was inaugurated a full year and three months course for medical assistants.—*Bulletin of the Buchanan County Medical Society.*

I would like to remind the members of the Society that many of the County Societies over the country are instituting a call system under the supervision of the Societies. I have been told . . . that definite efforts should be made to establish such a call system in this county.—F. Gregg Thompson, Jr., M.D., *Bulletin, Buchanan County Medical Society.*

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

specialized service
assures "*know-how*"

ST. LOUIS Office:
Robert M. Childers, Rep.,
7004 A Glenmore,
Tel. Evergreen 2950

SECLUSION MATERNITY

FAIRMOUNT
HOSPITAL

For Unmarried Girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

GENERAL PRACTICE-COMPLETELY EQUIPPED CLINIC. Partner leaving for Army. Prefer draft exempt G.P. under 35, qualified for general surgery. Volume and remuneration practically unlimited. Excellent hospital facilities. Missouri. Terms open. Full details in first letter. Box 185, Journal of Missouri State Medical Association, 634 N. Grand Ave., St. Louis 3, Mo.

SITUATION WANTED: General Practitioner; age 29; Family; Category IV; completing rotating internship June, 1953; Desire association with G.P. or group. Write Box 186, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

FOR SALE—Illinois-Established Clinic and Small Hospital with all equipment, excellent setup for General Practitioner, Internist, Surgeon, and O.B. Medical Group; Terms; Each Doctor should net at least $50,000 per year. Write Leonard Blameuser, 5114 Oakton St., Skokie, Ill.

GENERAL PRACTITIONER, young locum tenens for busy general practice. Town 3500, new hospital. Partner entering service. Good chance permanent association when partner returns. Salary open. Write Robert W. Smith, M.D., Marceline, Mo.

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine .....0.1 mg.
Atropine sulfate .....0.02 mg.
Hyoscine hydrobromide .....0.0065 mg.
Phenobarbital (¼ gr.) .....16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.
Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

INDEX TO ADVERTISERS

Abbott Laboratories 399, 446-447
Ayerst, McKenna & Harrison, Ltd. 425

Baker Laboratories 430
Bilhuber-Knoll 426
Blue Cross-Blue Shield 449

California State Personnel Board 459
Camel Cigarettes 401
Canada Dry Ginger Ale 460
City View Sanitarium 459
Cook County Graduate School 462
Continental Casualty Co. 457

Dumas-Wilson Company 453
Duncan Laboratories 418

Fairmount Hospital 461

General Electric X-Ray Corp. 403

Hamilton-Schmidt Surgical Co. 459

Kansas City Southwest Clinical Society 396
Katz Drug Company 458
Keeley Institute 452
Kent Cigarettes 454
Knox Gelatine Company 460

Lederle Laboratories ..... Insert
Eli Lilly & Company 410

Mead Johnson & Company 464
Medical Protective Company 461
Merck & Company ..... Insert
Milwaukee Sanitarium 426

Neurological Hospital Association 456
Norbury Sanitarium 462
North Shore Health Resort 386

O'Connell Bros., Inc. 461

Parke, Davis & Company 394-395
Chas. Pfizer & Co. 451
Physicians Casualty Association 455
Mary E. Pogue School 459
Producers Creamery Company 452

Research Clinic 397

Schering Corporation 407
Schieffelin & Co. 448
G. D. Searle & Co. 417
E. R. Squibb & Sons 437

U. S. Brewers Foundation, Inc. 424
Upjohn Company 463

West Texas Maternity Hospital 459
Wyeth, Inc. 409
Dorothy Worrell 461

Zemmer Company 309

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Cook County Graduate School of Medicine

Postgraduate Courses—1953

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting June 15, July 6, August 3.
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting August 3.
Surgical Anatomy & Clinical Surgery, Two Weeks, starting June 15, August 17.
Fractures & Traumatic Surgery, Two Weeks, starting June 15.
Esophageal Surgery, One Week, starting June 22.
Breast & Thyroid Surgery, One Week, starting June 22.
Gallbladder Surgery, Ten Hours, starting June 29.
Surgery of Colon & Rectum, One Week, starting September 21.
Basic Principles in General Surgery, Two Weeks, starting September 21.
General Surgery, One Week, starting October 5.
General Surgery, Two Weeks, starting October 12.
Thoracic Surgery, One Week, starting October 12.

GYNECOLOGY—Intensive Course, Two Weeks, starting June 15, September 21.
Vaginal Approach to Pelvic Surgery, One Week, starting September 14.

OBSTETRICS—Intensive Course, Two Weeks, starting October 5.

MEDICINE—Intensive General Course, Two Weeks, starting October 12.
Electrocardiography & Heart Disease, Two Weeks, starting July 13.
Allergy, One Month and Six Months, by appointment.

CYSTOSCOPY—Ten-Day Practical Course starting every two weeks.

UROLOGY—Intensive Course, Two Weeks, starting September 28.

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Meat and its applicability in the Dietary Management of Atherosclerosis

Contrary to the former belief that serum cholesterol levels are primarily related to ingested animal fat and consequently to dietary cholesterol, it now appears that the total amount of fat in the diet, not its source or cholesterol content, is a more important factor in determining the blood cholesterol concentration.[1,2,3,4] Clinical observation has shown that ingestion of vegetable fat—which contains no cholesterol—will, like fats of animal origin, raise the serum cholesterol level.[3, 5]

Recent basic research on the influence of fats and cholesterol on human health has done much to further progress in the fight against atherosclerosis. It will serve well in dispelling the mistaken fear that reasonable amounts of foods of animal origin predispose the individual to this vascular disease.[6] As a matter of fact, a dietary inadequate in essential nutrients but providing too many calories and too much fat from *any* source may well be an important factor underlying the deposition of fat and cholesterol in the arteries and liver.

Cumulative evidence indicates that lowered blood levels of cholesterol may be effected by restricting the total fat intake.[1] Except in instances of refractory hypercholesteremia, in which a daily fat intake as low as 10 Gm. may not reduce cholesterol levels to normal, diets containing 20 to 30 Gm. of fat, or even more, often produce low cholesterol blood levels. In the clinical application of this principle, various palatable, low fat diets which supply three servings of meat daily (containing 18 Gm. of fat) have recently been suggested for the dietary management of arteriosclerosis and for enlisting the cooperation of patients.[1] The meat servings were chosen from a large variety of cuts and kinds of meat (fat trimmed off, as lean as possible). Meat adds to the eating appeal of the fat-restricted diet and contributes important amounts of biologically complete protein, the B group of vitamins including B_{12}, and food iron—all of which are important for a good state of nutrition in the atherosclerotic patient.

1. Hildreth, E.A.; Hildreth, D.M., and Mellinkoff, S.M.: Principles of a Low Fat Diet, Circulation *4*:899 (Dec.) 1951.
2. Bloch, K.: The Intermediary Metabolism of Cholesterol, Circulation *1*:214 (Feb.) 1950.
3. Keys, A.; Mickelson, O.; Miller, E.V.O., and Chapman, L.B.: The Relation in Man Between Cholesterol Levels in the Diet and in the Blood, Science *112*:79, 1950.
4. Gubner, R., and Ungerleider, H.E.: Arteriosclerosis, a Statement of the Problem, Am. J. Med. *6*:60, 1949.
5. Hildreth, E.A.; Mellinkoff, S.M.; Blair, G.W., and Hildreth, D.M.: The Effect of Vegetable Fat Ingestion on Human Serum Cholesterol Concentration, Circulation *3*:641 (May) 1951.
6. King, C.G.: Trends in the Science of Food and Its Relation to Life and Health, Nutrition Rev. *10*:1 (Jan.) 1952.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago... Members Throughout the United States

AMERICAN MEDICAL ASSOCIATION

President, Edward J. McCormick, Toledo, Ohio
President-Elect, Walter B. Martin, Norfolk, Virginia

Clinical Session, St. Louis
December 1-4, 1953

MISSOURI STATE MEDICAL ASSOCIATION

96th Annual Session, St. Louis
April 4-8, 1954

President, E. C. Bohrer, West Plains.
President-Elect, H. E. Petersen, St. Joseph.
Vice Presidents, Guy N. Magness, University City; Frank R. Teachenor, Kansas City; Thomas E. Ferrell, Springfield.
Treasurer, Carl F. Vohs, St. Louis.
Secretary, E. Royce Bohrer, Jefferson City.
Speaker of the House of Delegates, Victor E. Scherman, St. Louis; Vice Speaker, Joseph L. Fisher, St. Joseph.
Editor, V. T. Williams, Kansas City.
Scientific Editor, R. O. Muether, St. Louis.
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.
Assistant Editor-Business Manager, Helen Penn, St. Louis.
Field Secretary, Raymond McIntyre, St. Louis.
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., 634 N. Grand Ave., St. Louis.

Delegates to the American Medical Association

R. E. Schlueter, St. Louis, 1951-1953; alternate, Joseph C. Peden, St. Louis. James R. McVay, Kansas City, 1951-1953; alternate, R. B. Wray, Nevada. A. S. Bristow, Princeton, 1952-1954; alternate, J. W. Shaw, Fayette. Paul Baldwin, Kennett, 1952-1954; alternate, Julius Jensen, St. Louis.

Standing Committees

Scientific and Postgraduate Work—Paul O. Hagemann, St. Louis, Chairman (1954); Ralph R. Coffey, Kansas City (1954); Wm. P. Maddux, Springfield (1955); M. Pinson Neal, Columbia (1956); Kenneth Glover, Mount Vernon (1954). **Associate Members**—Walter W. Tillman, Springfield; F. R. Crouch, Farmington; Maxwell G. Berry, Kansas City; Harold J. Brumm, St. Joseph; M. S. Wepprich, Washington; Alphonse McMahon, St. Louis.

Publication—Vincent T. Williams, Kansas City, Chairman; R. O. Muether, St. Louis; Paul O. Hagemann, St. Louis; M. D. Overholser, Columbia; John P. Ferguson, Springfield.

Defense—C. E. Hyndman, St. Louis, Chairman (1954); O. B. Zeinert, St. Louis (1955); L. P. Forgrave, St. Joseph (1955); Roland S. Kieffer, St. Louis (1956); James H. O'Neil, Kansas City (1956).

Public Policy and Public Relations—W. F. Francka, Hannibal, Chairman; E. C. Bohrer, West Plains; H. E. Petersen, St. Joseph; J. W. Allee, Columbia; Jerome I. Simon, St. Louis.

Medical Education and Hospitals—W. J. Ferguson, Sikeston, Chairman (1955); Harry K. Purcell, St. Louis (1956); John S. Knight, Kansas City (1954); M. K. Underwood, Rolla (1955); John J. Modlin, Columbia (1956).

Cancer—E. C. Ernst, St. Louis, Chairman (1956); Marvin L. Napper, Springfield (1955); Thomas Martin, St. Louis (1955); Everett Sugarbaker, Jefferson City (1954); E. Kip Robinson, Kansas City (1954). **Associate Members**—Jack H. Hill, Kansas City; Frederick J. McCoy, Kansas City.

Medical Economics—A. P. Rowlette, Moberly, Chairman (1955); E. Royce Bohrer, Jefferson City (1955); C. T. Herbert, Cape Girardeau (1954); Arthur B. Smith, Kansas City (1954); Charles R. Doyle, St. Louis (1956).

Mental Health—Thomas Thale, St. Louis, Chairman (1955); E. F. Hoctor, Farmington (1954); John M. Sartin, Springfield (1955); Ernest H. Parsons, St. Louis (1956); G. Wilse Robinson, Jr., Kansas City (1956).

Maternal Welfare—Kenneth E. Cox, Kansas City, Chairman (1956); E. Lee Dorsett, St. Louis (1955); Leo J. Hartnett, St. Louis (1955); J. L. Johnston, Springfield (1954); E. E. Wadlow, St. Joseph (1956). **Associate Members**—G. L. Miller, Kansas City; William See, Columbia; James E. Keeler, Kansas City; Helman C. Wasserman, St. Louis; A. L. Crawford, Joplin; Ora J. Gibson, Cape Girardeau.

Infant Care—Daniel B. Landau, Hannibal, Chairman (1954); R. J. LaDriere, St. Louis (1955); Eugene J. Schwartz, Springfield (1955); George V. Herrman, Kansas City (1954); J. S. Sennott, Jefferson City (1956). **Associate Members**—Guy N. Magness, University City; Joseph Conrad, Chillicothe; Robert H. Hodge, North Kansas City; W. E. Henrickson, Poplar Bluff.

Health and Public Instruction—A. W. McAlester, III, Kansas City, Chairman (1956); J. Earl Smith, St. Louis (1955); Rolla B. Wray, Nevada (1954); George A. Kelling, Waverly (1954); Guy V. Everist, Rolla (1956).

Constitution and By-Laws—Durward G. Hall, Springfield, Chairman (1954); W. L. Allee, Eldon (1955); Paul Baldwin, Kennett (1955); Curtis H. Lohr, St. Louis (1956); H. M. Parker, Kansas City (1956).

Fractures—Richard H. Kiene, Kansas City, Chairman (1956); Daniel L. Yancey, Springfield (1955); W. J. Stewart, Columbia (1954); N. S. Pickard, Kansas City (1954); Vilray P. Blair, Jr., St. Louis (1956). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal; Thomas G. Otto, Cape Girardeau; Ralph K. Earp, St. Louis.

Conservation of Eyesight—C. Souter Smith, Springfield, Chairman (1955); Robert D. Mattis, St. Louis (1955); W. L. Post, Joplin (1954); A. N. Lemoine, Kansas City (1956); H. B. Stauffer, Jefferson City (1956). **Associate Members**—John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; George Hornback, Hannibal; C. H. Brady, Sedalia; Theodore E. Sanders, St. Louis; D. E. Eggleston, Macon.

Control of Venereal Disease—E. M. Cannon, St. Louis, Chairman (1955); A. W. Neilson, St. Louis (1955); J. G. Siceluff, Springfield (1954); Charles C. Dennie, Kansas City (1956); James C. Cope, Columbia (1956). **Associate Member**—R. J. Murphy, Kansas City.

Industrial Health—H. M. Roebber, Bonne Terre, Chairman (1954); Vencel W. Hollo, St. Louis (1955); F. L. Feierabend, Kansas City (1955); V. T. Williams, Kansas City (1954); S. W. Scorse, Joplin (1956).

Diabetes—William H. Olmsted, St. Louis, Chairman (1955); Blaine Z. Hibbard, Kansas City (1955); Llewellyn Sale, St. Louis (1954); E. D. Baskett, Columbia (1954); Lucien W. Ide, St. Joseph (1956). **Associate Members**—Vincent J. LoPiccolo, St. Louis; A. W. Hanss, Springfield; T. L. Dwyer, Mexico.

Anesthesiology—R. M. S. Barrett, St. Louis, Chairman (1956); Carl K. Ness, St. Joseph (1954); Joseph A. McNearney, Richmond Heights (1955); Merritt H. Kimball, Kansas City (1955); O. B. Crawford, Springfield (1954).

Hospital and Professional Relations—Paul N. Johnstone, Kansas City, Chairman (1956); Hollis Allen, St. Louis (1955); C. G. Stauffacher, Sedalia (1955); Joseph L. Fisher, St. Joseph (1954); Stanley S. Peterson, Springfield (1954).

Special Committees

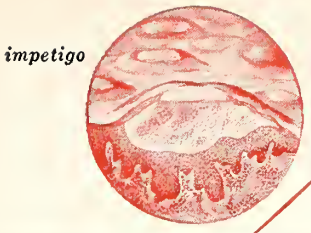
Physical Medicine—Sedgwick Mead, St. Louis, Chairman (1955); C. Stewart Gillmor, Kansas City (1954); R. A. Ritter, Cape Girardeau (1955); Luke A. Knese, St. Louis (1956).

Tuberculosis—Paul Murphy, St. Louis, Chairman; I. J. Flance, St. Louis; E. E. Glenn, Springfield; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; C. A. Brasher, Mount Vernon; W. P. McDonald, St. Joseph; F. E. MacInnis, Kansas City; H. L. Greene, Hannibal.

Study of Cardiac Disease—E. Lee Shrader, St. Louis, Chairman (1956); H. W. Carle, St. Joseph (1955); V. Bryce Ballard, Kansas City (1955); Drew Luten, St. Louis (1954); A. M. Estes, Cape Girardeau (1954). **Associate Members**—E. J. McIntire, Carthage; Earl L. Loyd, Jefferson City; W. I. Park, Springfield.

Alcoholism—Ralph E. Duncan, Kansas City, Chairman; S. D. Smith, Columbia; Kenneth Coffelt, Springfield; Joseph B. Kendis, St. Louis; George W. Forman, St. Joseph.

Rural Medical Service—A. E. Spelman, Smithville, Chairman; H. W. Carrington, Lebanon; W. A. Broyles, Bethany; W. J. Shaw, Fayette; Joseph C. Creech, Troy; Charles H. Lewellen, Louisiana; C. A. McBurney, Slater; A. J. C. McCallum, Aurora; John J. Killion, Portageville.

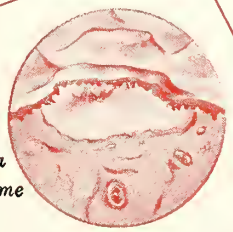

impetigo

skin infections and antibiotics

acne

pyoderma

folliculitis


erythema multiforme

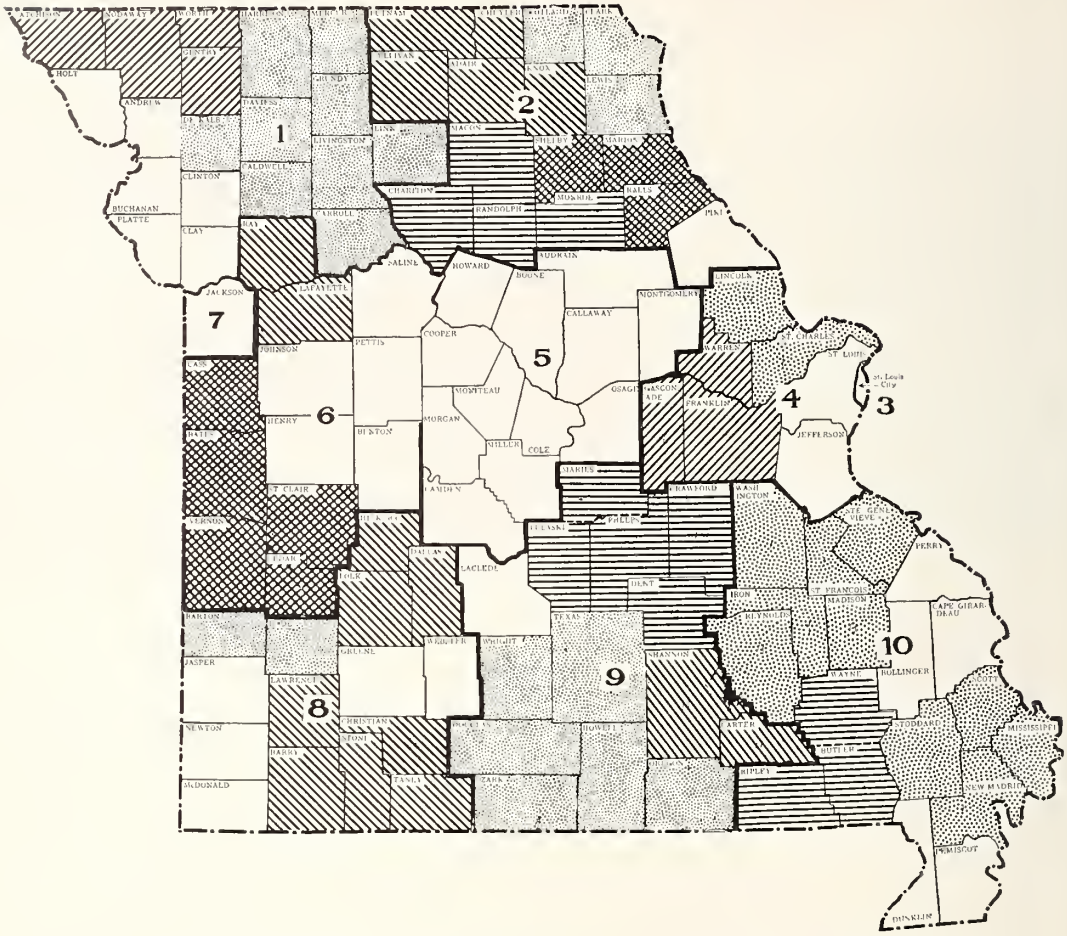
Since cutaneous bacterial infections "probably account for more disability than any other group of skin diseases,"[1] the availability of broad-spectrum Terramycin has been particularly helpful in controlling these common disorders. This pure, well-tolerated antibiotic is markedly effective against the wide range of organisms often implicated as primary or secondary pathogens in skin disease. Successful clinical experience[2,3,4] in the treatment of impetigo, acne, pyodermas, erythema multiforme and other cutaneous infections recommends the selection of Terramycin as an agent of choice in common diseases of the skin. Terramycin is supplied in convenient oral and intravenous dosage forms.

1. *Bednar, G. A.: South. M. J. 46:298 (March) 1953.*
2. *Wright, C. S. et al.: A. M. A. Arch. Dermat. & Syph. 67:125 (Feb.) 1953.*
3. *Robinson, H. M. et al.: South. M. J. (in press).*
4. *Andrews, G. C. et al.: J. A. M. A. 146:1107 (July 21) 1951.*

Terramycin
BRAND OF OXYTETRACYCLINE

Pfizer
CHAS. PFIZER & CO., INC.
Brooklyn 6, N. Y.

Councilor Districts and Counties in Each District



VICTOR B. BUHLER, Kansas City, Chairman.

W. S. SEWELL, Springfield, Vice Chairman.

First District: Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte, Worth.

Second District: Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

Third District: Councilor, R. O. Muether, St. Louis. Counties: St. Louis City.

Fourth District: Councilor, Otto W. Koch, Clayton. Counties: Franklin, Gasconade, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

Fifth District: Councilor, J. Loren Washburn, Versailles. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan, *Osage*.

Sixth District: Councilor, C. G. Stauffacher, Sedalia. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline, Vernon.

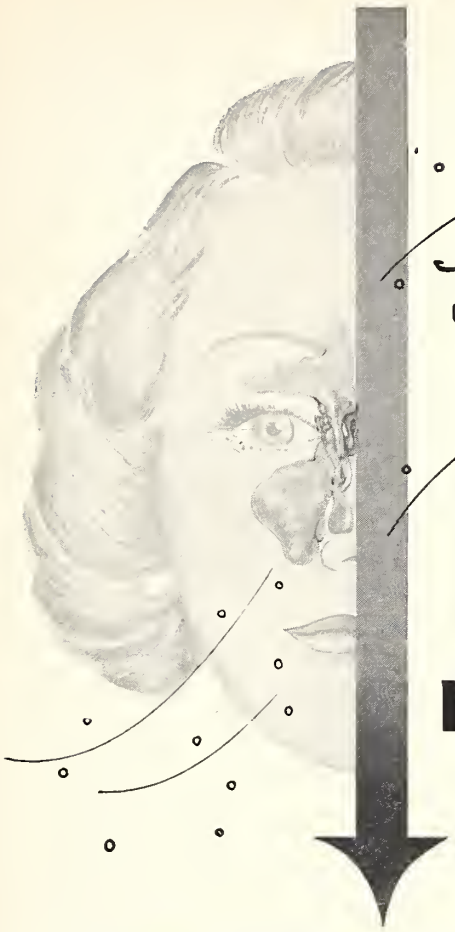
Seventh District: Councilor, Victor B. Buhler, Kansas City. County: Jackson.

Eighth District: Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, *McDonald*, Newton, Polk, Stone, Taney, Webster.

Ninth District: Councilor, J. H. Summers, Lebanon. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon, Texas, Wright.

Tenth District: Councilor, Frank W. Hall, Cape Girardeau. Counties: *Bollinger*, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Shaded areas show hyphenated component societies. Counties listed in italics are unorganized.



To open congested air passages in hay fever

NEO-SYNEPHRINE®

HYDROCHLORIDE

. . . reduces nasal engorgement . . .

. . . promotes aeration . . . encourages drainage

A few drops of Neo-Synephrine 0.25% in each nostril will promptly check mucosal engorgement and hypersecretion, promoting greater breathing comfort over a period of several hours.

The resultant relief to the hay fever sufferer is decidedly gratifying. Prolonged action of Neo-Synephrine makes fewer applications necessary, consequently longer periods of rest and sleep are possible.

Neo-Synephrine does not lose its effectiveness on repeated application and may, therefore, be relied upon to give relief throughout the hay fever season.

Neo-Synephrine is practically free from sting and compensatory congestion; does not appreciably inhibit ciliary activity. Neo-Synephrine has been found relatively free from systemic side effects such as nervous excitation, cardiac reaction or insomnia even when tested on hypertensive, cardiac and hyperthyroid patients.[1]

Supplied in 0.25% solution (plain), bottles of 1 oz., 4 oz. and 16 oz.; 0.25% solution (aromatic), bottles of 1 oz. and 16 oz.; 0.5% solution, bottles of 1 oz.; 1% solution, bottles of 1 oz., 4 oz. and 16 oz.; 0.125 (1/8)% solution, bottles of 1/2 oz.; 0.5% water soluble jelly, in 5/8 oz. tubes.

1. Van Alyea, O. E., and Dannelly, Allen: *Arch. Otolaryng.*, 49:234, Feb., 1949.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Neo-Synephrine, trademark reg. U.S. & Canada, brand of phenylephrine.

County Societies in Affiliation with the Missouri State Medical Association

County	District	President	Address	Secretary	Address
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Chas. L. Garcia	Mexico	Harry F. O'Brien	Mexico
Barton-Dade	8	H. M. Arnold	Lamar	Lee A. McNeel, Jr.	Greenfield
Bates	6	Carter W. Luter	Butler	L. D. LaHue	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	Horace E. Thomas	Columbia	Charles Lamke	Columbia
Buchanan	1	F. G. Thompson	St. Joseph	Allen I. Herman	St. Joseph
Butler-Ripley-Wayne	10	W. E. Henrickson	Poplar Bluff	Robert Engelhardt	Poplar Bluff
Callaway	5	Ralph Hanks	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	John Harry Keim	Cape Girardeau	Harold D. Ridings	Cape Girardeau
Carter-Shannon	9	Harry Rollins	Winona		
Cass	6	Edward S. Jones	Harrisonville	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	P. V. Dreyer	Huntsville	Clarence C. Cohrs	Moberly
Clay	1	G. E. Sanders	Excelsior Springs	S. R. McCracken	Excelsior Springs
Clinton	1	W. B. Spalding	Plattsburg	R. E. Wilbur	Cameron
Cole	5	E. L. Loyd	Jefferson City	H. V. Guhleman, Jr.	Jefferson City
Cooper	5	W. E. Stone	Boonville	J. C. Tincher	Boonville
Dallas-Hickory-Polk	8	Evelyn Griffin	Buffalo	George Robinson	Humansville
Dunkin	10	Joe Zimmerman	Kennett	E. L. Spence	Kennett
Franklin-Gasconade-Warren	4	Carvel T. Shaw	Hermann	Michael S. Wepprich	Washington
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, De Kalb)	1	V. D. Vandiver	Chillicothe	E. A. Duffy	Trenton
Greene	8	W. J. Marshall	Springfield	Charles E. Lockhart	Springfield
Henry	6	Hugh B. Walker	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound city
Howard	5	F. D. Dean	Fayette	W. C. Allen	Glasgow
Jackson	7	Claude J. Hunt	Kansas City	Kenneth C. Hollweg	Kansas City
Jasper	8	V. E. Jeans	Joplin	Katherine Kiehl	Joplin
Jefferson	4	Vernon E. Schulein	Crystal City	J. F. Rutledge	Crystal City
Johnson	6	O. H. Damron	Warrensburg	T. Reed Maxson	Warrensburg
Laclede	9	J. H. Hope	Lebanon	G. E. Fisher	Lebanon
Lafayette-Ray	6	Melvin Masterson	Richmond	M. C. Johnson	Richmond
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln-St. Charles	4	H. C. McMurray	Wentzville	J. C. Creech	Troy
Marion-Ralls	2	D. B. Landau	Hannibal	R. J. Lanning	Hannibal
Miller	5			Carl T. Buehler, Jr.	Eldon
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)	10	Marvin Grossman	Fredericktown	Byron Taylor	Flat River
Moniteau	5	E. A. Kibbe	California	K. S. Latham	California
Montgomery	5	E. J. T. Andersen	Montgomery City	S. J. Byland	Wellsville
Morgan	5	J. L. Washburn	Versailles	Ruth Kauffman	Versailles
Newton	8	L. E. Rolens	Granby	L. T. Taylor	Neosho
Nodaway-Atchison-Gentry-Worth	1	Edw. L. Niedermeyer	Tarkio	Charles D. Humberd	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Val E. Miltenberger	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	A. J. C. McCallum	Aurora	Arthur A. Mickel	Cassville
Pemiscot	10	C. D. Kaiser	Hayti	C. F. Cain	Caruthersville
Perry	10	O. A. Carron	Perryville	J. F. Lutkewitte	St. Marys
Pettis	6	P. V. Siegel	Smithton	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	F. A. Elders, Jr.	Cuba	M. K. Underwood	Rolla
Pike	2	Wm. B. Wilcoxen	Bowling Green	J. H. Hooker	Clarksville
Platte	1	L. C. Calvert	Weston	D. M. Miller	Platte City
St. Louis City	3	A. N. Arneson	St. Louis	David N. Kerr	St. Louis
St. Louis	4	Guy N. Magness	St. Louis	Roy A. Walther, Jr.	Overland
Saline	6	J. R. Lawrence	Marshall	James A. Reid	Marshall
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)	10	W. J. Ferguson	Sikeston	Wm. C. Critchlow	Sikeston
Shelby	2	Perry C. Archer	Shelbyville	T. J. Hoerchler	Shelbina
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Scott G. Kramer	Houston	A. C. Ames	Mountain Grove
Vernon-Cedar	6	T. B. Todd	Nevada	F. L. Martin	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour

antibiotics . . .

USE ERYTHROCIN*

...especially effective against gram-positive organisms including those resistant to penicillin and the other antibiotics.

USE ERYTHROCIN*

. . . has low toxicity; orally effective against infections caused by staphylococci, streptococci and pneumococci.

USE ERYTHROCIN*

. . . indicated in pharyngitis, tonsillitis, scarlet fever, pneumonia, erysipelas, osteomyelitis and pyoderma.

USE ERYTHROCIN*

...gastrointestinal disturbances mild and relatively rare; no serious side effects reported.

USE ERYTHROCIN*

. . . fully potent; average adult daily dose 0.8 to 2.0 Gm., depending on type, severity of infection.

USE ERYTHROCIN*

...special absorption-favoring coating; 0.1 Gm. (100 mg.) tablets supplied in bottles of 25 and 100. Abbott

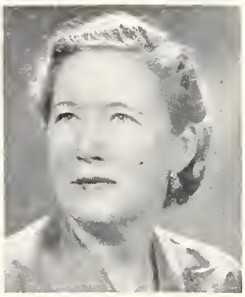
*Trade Mark for
ERYTHROMYCIN, ABBOTT

1-178

Woman's Auxiliary Officers

MRS. C. ALEX McBURNEY
SLATER
President

MRS. W. E. MARTIN
ODESSA
President-Elect



MRS. NORTON J. EVERSOLL
ST. LOUIS
First Vice President

MRS. VICTOR B. BUHLER
KANSAS CITY
Recording Secretary

MRS. RALPH H. JONES
SWEET SPRINGS
Corresponding Secretary

MRS. FRANK B. LEITZ
KANSAS CITY
Treasurer

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 July, 1953 Number 7

Minutes of the House of Delegates

Ninety-Fifth Annual Session
Municipal Auditorium, Kansas City
April 26, 27, 28, 29, 1953

Sunday Session

The first meeting of the House of Delegates of the Ninety-Fifth Annual Session of the Missouri State Medical Association was called to order at 2:00 p.m., April 26, in the Little Theater, Municipal Auditorium, Kansas City, with Victor E. Scherman, M.D., St. Louis, Speaker, presiding.

Officers, Councilors and Delegates present during the Annual Session follow:

Officers

President.....J. Wm. Thompson, St. Louis
President-Elect.....E. C. Bohrer, West Plains
Secretary.....H. E. Petersen, St. Joseph
Editor.....V. T. Williams, Kansas City
Vice-President.....Clinton W. Lane, St. Louis
Vice-President.....Peter T. Bohan, Kansas City
Vice-President.....J. Will Fleming, Moberly

Councilors

1st District.....Donald M. Dowell, Chillicothe
2nd District.....W. F. Francka, Hannibal
3rd District.....R. O. Muether, St. Louis
4th District.....John O'Connell, Overland
5th District.....J. Loren Washburn, Versailles
6th District.....R. W. Kennedy, Marshall
7th District.....Victor B. Buhler, Kansas City
8th District.....W. S. Sewell, Springfield
9th District.....J. H. Summers, Lebanon
10th District.....F. W. Hall, Cape Girardeau

Delegates
First District

Buchanan.....H. W. Carle, St. Joseph
Buchanan.....Joseph L. Fisher, St. Joseph
Buchanan.....L. Paul Forgrave, St. Joseph
Clay.....Maurice Chastain, North Kansas City
Grand River
Caldwell.....Frank R. Daley, Hamilton
Carroll.....Carl H. Reed, Carrollton
Livingston.....Joseph Conrad, Chillicothe
Grundy.....Charles H. Cullers, Trenton
Daviess.....Edward E. Nixon, Gallatin
Harrison.....M. Gearhart, Bethany
Linn.....John R. Nixon, Brookfield
Mercer.....Marian Lambert, Princeton
Nodaway-Atchison-
Gentry-Worth.....W. R. Jackson, Maryville
Nodaway-Atchison-
Gentry-Worth.....Wallace Carpenter, Rock Port
Nodaway-Atchison-
Gentry-Worth.....Frank B. Matteson, Grant City

Second District

Chariton-Macon-
Monroe-Randolph.....C. C. Weger, Keytesville
Chariton-Macon-
Monroe-Randolph.....Edward Johnson, Macon
Chariton-Macon-
Monroe-Randolph.....T. S. Fleming, Moberly
Lewis-Clark-Scotland...P. W. Jennings, Canton
Marion-Ralls-Shelby....B. L. Murphy, Hannibal
Marion-Ralls-Shelby....T. J. Hoerchler, Shelbina
North Central.....V. E. Miltenberger, Kirksville
Pike.....C. H. Lewellen, Louisiana

Third District

St. Louis City.....A. N. Arneson, St. Louis
St. Louis City.....David N. Kerr, St. Louis
St. Louis City.....Stanley F. Hampton, St. Louis
St. Louis City.....Jerome I. Simon, St. Louis
St. Louis City.....Harry K. Purcell, St. Louis
St. Louis City.....Henry C. Allen, St. Louis
St. Louis City.....Joseph C. Edwards, St. Louis
St. Louis City.....Joseph C. Peden, St. Louis
St. Louis City.....Curtis A. Meyer, St. Louis
St. Louis City.....V. E. Scherman, St. Louis
St. Louis City.....Leo Gottlieb, St. Louis
St. Louis City.....A. R. Dalton, St. Louis
St. Louis City.....Louis H. Kohler, St. Louis
St. Louis City.....Louis T. Litzow, St. Louis
St. Louis City.....Andrew J. Signorelli, St. Louis
St. Louis City.....Walter Baumgarten, Jr., St. Louis
St. Louis City.....Daniel L. Sexton, St. Louis
St. Louis City.....Mary E. Morris, St. Louis
St. Louis City.....Douglas A. Ries, St. Louis
St. Louis City.....Paul F. Max, St. Louis
St. Louis City.....Willard Bartlett, St. Louis
St. Louis City.....Robert B. Bassett, St. Louis
St. Louis City.....Sam J. Merenda, St. Louis
St. Louis City.....Leon F. Weyerich, St. Louis
St. Louis City.....Bernard T. Koon, St. Louis
St. Louis City.....Max S. Franklin, St. Louis
St. Louis City.....Gene B. Starkloff, St. Louis

Fourth District

Franklin-Gasconade-
Warren.....F. G. Mays, Washington
Franklin-Gasconade-
Warren.....Carvel T. Shaw, Hermann
Franklin-Gasconade-
Warren.....G. C. Johnson, Marthasville

Lincoln-St. Charles.....E. O. Damron, Elsberry
Lincoln-St. Charles.....Don Q. Randall, St. Charles
St. Louis County.....O. P. Hampton, Jr., St. Louis
St. Louis County.....Richard A. Sutter, St. Louis
St. Louis County.....Martyn Schattyn, St. Louis
St. Louis County.....Paul Whitener, Overland
St. Louis County.....Roy A. Walther, Sr., Overland
St. Louis County.....E. R. Brown, University City
St. Louis County.....Guy N. Magness, St. Louis

Fifth District

Audrain.....Thomas L. Dwyer, Mexico
Boone.....J. W. Allee, Columbia
Boone.....A. R. McComas, Sturgeon
Cole.....E. R. Bohrer, Jefferson City
Howard.....William C. Allen, Glasgow
Miller.....W. L. Allee, Eldon
Morgan.....Jack Gunn, Versailles

Sixth District

Bates.....E. E. Robinson, Adrian
Benton.....David H. Glenn, Warsaw
Cass.....William R. Brown, Pleasant Hill
Henry.....G. S. Walker, Clinton
Johnson.....Charles M. Lederer, Warrensburg
Lafayette-Ray.....W. E. Martin, Odessa
Pettis.....C. G. Stauffacher, Sedalia
Saline.....C. A. McBurney, Slater
Vernon-Cedar.....Wm. H. Allen, Nevada
Vernon-Cedar.....John J. Hill, Eldorado Springs

Seventh District

Jackson.....Frederick B. Campbell, Kansas City
Jackson.....Wm. B. Cheeseman, Kansas City
Jackson.....Ralph R. Coffey, Kansas City
Jackson.....Ralph E. Duncan, Kansas City
Jackson.....W. Wallace Greene, Kansas City
Jackson.....J. A. Growdon, Kansas City
Jackson.....George V. Herrman, Kansas City
Jackson.....R. Lee Hoffmann, Kansas City
Jackson.....William C. Mixson, Kansas City
Jackson.....Gerold L. Miller, Kansas City
Jackson.....F. Stanley Morest, Kansas City
Jackson.....William C. Schaerrer, Kansas City
Jackson.....Joseph E. Welker, Kansas City
Jackson.....Clifford C. Wilson, Kansas City

Eighth District

Barton-Dade.....Herbert M. Arnold, Lamar
Dallas-Hickory-Polk.....O. A. Griffin, Buffalo
Greene.....W. W. Tillman, Springfield
Greene.....Thomas E. Ferrell, Springfield
Greene.....Joseph L. Johnston, Springfield
Jasper.....R. M. Ferguson, Webb City
Jasper.....B. E. DeTar, Joplin
Ozarks
Barry.....A. A. Mickel, Cassville
Lawrence.....Kenneth Glover, Mt. Vernon
Stone.....Fred Womack, Crane
Taney.....J. M. Threadgill, Forsyth

Ninth District

Carter-Shannon.....T. W. Cotton, Van Buren
Laclede.....H. W. Carrington, Lebanon
Phelps-Crawford-Dent-Pulaski.....R. E. Breuer, Newburg
Phelps-Crawford-Dent-Pulaski.....J. Campbell, Steelville
South Central
Howell.....Jack N. Wiles, West Plains
Oregon.....C. W. Cooper, Thayer
Texas.....S. G. Kramer, Houston
Wright.....S. W. Connor, Mountain Grove

Tenth District

Butler.....W. E. Henrickson, Poplar Bluff
Cape Girardeau.....E. D. Campbell, Cape Girardeau
Dunklin.....Paul Baldwin, Kennett
Mineral Area
St. Francois.....H. M. Roebber, Bonne Terre
Iron.....Ben M. Bull, Ironton
Reynolds.....Andrew F. Bugg, Ellington
Pemiscot.....S. B. Beecher, Caruthersville
Semo
New Madrid.....C. C. Reeder, New Madrid
Mississippi.....Wilbur Davis, Charleston
Scott.....W. O. Finney, Chaffee

Reverend Samuel S Mayerberg, Rabbi of the Congregation B'Nai Jehudah, Kansas City, delivered the invocation.

Henry Allen, M.D., St. Louis, reported for the Committee on Credentials.

Mr. T. R. O'Brien read the roll of delegates and alternates, which showed a quorum present.

SPEAKER: The next order of business is the reading of the minutes of the previous meeting. They were published in the July 1953 issue of THE JOURNAL. What is your pleasure?

Upon motion, duly seconded, the minutes were approved as published.

Joseph L. Fisher, M.D., St. Joseph, Vice Speaker, presiding, the Speaker spoke as follows:

Many of you are here for the first time and many have been here many times before. I think it is sometimes wise to recall and to recount the ways and means of a deliberative body such as this is. You are all delegates from your constituent societies. I think it is well to bear in mind that you are delegates and not representing yourselves, and because of that you sometimes must consider not only your own opinion but the opinion of your constituents and then vote that way. There is a great deal of work to be accomplished in this session during the next few days. The Missouri State Medical Association is made up of its membership and from that membership comes certain standing committees. They investigate, they receive knowledge and they stand ready and waiting to do this great amount of work. Their reports will be presented today, most of which have been printed and you have read.

Then comes the House of Delegates from whom the Speaker appoints Reference Committees who will work with the reports and resolutions referred to them by the House. I urge you gentlemen who are interested in these various resolutions as they come up to attend these reference committee meetings. The time and place will be announced and will be posted at the registration desk. When these committees report, you are again privileged to discuss their findings in the House before final action is taken.

The Speaker appointed the following Reference Committees:

Reference Committee on Resolutions

Joseph C. Peden, St. Louis, Chairman.
Thomas E. Ferrell, Springfield.
Gerald L. Miller, Kansas City.

Reference Committee on Miscellaneous Affairs

Paul Baldwin, Kennett, Chairman.
R. E. Breuer, Newburg.
Frank B. Matteson, Grant City.

Reference Committee on Reports of Officers

W. L. Allee, Eldon, Chairman.
Louis Kohler, St. Louis.
Carl Reed, Carrollton.

Reference Committee on Constitution and By-laws

George V. Herrman, Kansas City, Chairman.
Frank G. Mays, Washington.
Daniel L. Sexton, St. Louis.

Reference Committee on Medical Education and Public Welfare

Ben Bull, Ironton, Chairman.
Don W. Randall, St. Charles.
W. Cecil Allen, Glasgow.

Reference Committee on Scientific Exhibits

C. G. Stauffacher, Sedalia, Chairman.
Kenneth Glover, Mount Vernon.
W. B. Cheeseman, Kansas City.
Edward Johnson, Macon.
Marion Lanbert, Princeton.

Reference Committee on Technical Exhibits

Paul Whitener, Overland, Chairman.
E. D. Campbell, Cape Girardeau.
C. T. Shaw, Hermann.
Charles H. Cullers, Trenton.
H. W. Carrington, Lebanon.

The Speaker announced the time and place of Reference Committee meetings.

J. W. Thompson, M.D., St. Louis, gave the President's Message as follows:

PRESIDENT'S MESSAGE

Mr. Speaker, Members of the House of Delegates: Time flies but work is permanent. This might well be the summation of the activities of our Association since this House of Delegates honored me just two years ago as President-elect. Each President inherits the problems of the past and serves as accoucheur to those he leaves to his successor. The time has come for me to review briefly the events of the last year and to comment on their possible influence for the future.

Many important problems have been encountered by your officers and councilors since last we met together. The year's developments have been considered and acted upon with due consideration of the Council's responsibility to the entire membership of our Association of which this House is representative. The problems have also been examined with due respect for the great obligations which we must meet in the atomic age of mankind's painful progress.

The panorama of recent political and historical events emphasizes the importance of the relationship of medicine to all the activities of man throughout the world. Indeed we must comprehend the forest so that we can appreciate and cultivate the trees. In Missouri there is ample evidence that our profession is alert to the needs of our people, that we are in step with progress, that can and will measure up "when the chips are down."

"*Salus populi suprema lex esto.*" The welfare of the people shall be the supreme law. This is the motto inscribed on the Great Seal of the State of Missouri. The health of the people shall be our supreme concern—might well be adopted as the motto of the Missouri State Medical Association. During the many years I have served in various capacities, this motto has characterized the activities of our Association. This has been true of our efforts in fostering the growth of scientific knowledge and in acting in public affairs to uphold sound medical values in the public interest.

On our wood-pile of problems there are many upon which we have been sawing in the hope of basking in the warmth of their burning. Both success and failure have been our reward.

The chairman of our Council will include in his report many of the accomplishments of our Association and its committees. In particular, I wish to point out the splendid work of Dr. Carroll Hungate in Civil Defense; for under his leadership, with that of Dr. Curtis Lohr and members of his committee, Missouri medicine is well started on its program of participation with state and federal authorities. The most recent atomic explosion at Nevada's Yucca Flats should alert the nation to all possible peril—and the people of Missouri should know that our Committee on Civil Defense has really been the "Paul Revere." Our most fervent hope, of course, is that these plans will never have to be implemented.

Among our other problems are such perennials as Blue Cross-Blue Shield, educational problems of intern residency training as they affect private hospitals throughout the state and county, the financial support of medical education, the osteopathic problem, the hyphenation program for county societies to foster unity and improved educational and professional relationships, the endless task of study and consideration of state and national legislation dealing with health problems. Let us consider a few of these matters one at a time.

The Blue Cross-Blue Shield plans for voluntary (as contrasted to compulsory) prepayment protection against health hazards are now established throughout the country. Their growth has been phenomenal. They are a concrete example of the practical way that doctors and hospitals, together with their army of technicians, nurses, ancillary personnel, physiotherapists, rehabilitation experts and others are working together in voluntary cooperation to meet the challenge of maintaining this country as the world's leader in the care of the health of citizens. The great contribution of the pharmaceutical and chemical industries in this combined effort, the development of "wonder drugs" and antibiotics are all part and parcel of this effort. Yet without the keystone the arch would fall. Medicine as a profession is the keystone.

The present national enrollment in Blue Cross is 43,638,000 and in Blue Shield 24,766,000. In programs of commercial insurance companies there are some 70,000,000 persons enrolled. This makes an impressive total of millions protected under our vigorous and growing voluntary system.

Here in our own State of Missouri, Blue Cross and Blue Shield have maintained their encouraging progress in extending protection to wide elements of the population. As of the end of 1952, enrollment of both Missouri Blue Cross plans totaled 1,151,000 after giving effect to the transfer of former Illinois members of the St. Louis plan. Total Blue Shield enrollment in the state stood at more than 645,000, a new high and an increase of 45,000 from the year before.

I do not have figures on the extent of commercial health insurance protection in Missouri, but it is apparent that the number of people protected must be great. The evidence is plain that in Missouri, as in the rest of the nation, people are conscious of the value of prepayment of major health costs and are acting through our voluntary arrangements to protect themselves more effectively each year.

Blue Cross and Blue Shield plans are primarily community-service organizations. Their founders, among the medical profession and hospital administrators, never conceived nor intended that they become insurance companies. The purpose was to help those among our population who wanted to help themselves by employing the insurance principle of many putting in a little to assist the few who might need a lot.

The American Medical Association's Council on

Medical Service has always emphasized that private enterprise insurance companies should also play a major part in the overall voluntary system of protection. The commercial insurance field is, of course, necessarily subject to statutory legislation. But the Blue Cross and Blue Shield plans are not commercial enterprises. They exist for nonprofit community service. They should be subject to the same general laws that govern all other "pro forma decree" corporations which have nonprofit public-service purposes as their chief reason for existence. On this basis they can more flexibly adapt their programs to the needs of the people.

At the conclusion of my talk I am going to speak briefly on a number of basic philosophical considerations which, it seems to me, ought to underly all our thinking and all our planning as we continue to foster voluntary institutions to serve the health needs of the public. Among these institutions none have served the people better or more practically than Blue Cross and Blue Shield, which the medical profession has had so great a part in sponsoring.

At this point I want simply to voice briefly a word of concern about the future. Blue Cross and Blue Shield have developed as local programs, locally administered to meet grass-roots local needs. They have grown in the context of our traditional medical and hospital care pattern—a pattern centered on the individual patient, the individual hospital, the individual doctor. The emphasis has been on the human situation ——the care of the sick.

There is, I believe, a danger that this wholesome emphasis may be altered in the future. There is danger that the bigness and bureaucracy inherent in national programs—in arrangements, for example, negotiated between great corporations and powerful unions —may tend to impose on local plans rigid policies and rules and limitations. The result may impair the basic principle of local responsibility, local control and local responsiveness to the individual human situation, which ought always to be the central consideration in any arrangement affecting the care of the sick. In other words, I believe bureaucracy will be no less bureaucratic if its power is wielded by giant national agencies outside government than if it were exercised by government itself. I shall touch on this topic once or twice again before the conclusion of my talk.

Another problem confronting us concerns the postgraduate education and training of interns, residents and technicians in the ancillary services of medical and health care. There is a need which cannot be met by medical schools and university hospitals alone. The larger hospitals in metropolitan areas can supply this demand.

These hospitals are, however, and necessarily so, required to meet certain standards imposed by accrediting authorities composed of representatives of the American College of Surgeons, the American Medical Association and the American Hospital Association. These rules and regulations are, in theory at least, the product of democratic representation of the membership of the three organizations. They are intended to protect the public organizations. They are intended to protect the public health by various policies and to provide opportunities for young men and women to increase their skills in the science and art of medicine.

It is questionable whether or not some of these policies are wise or practical, particularly those concerning the distribution of interns by means of the "matching plan." This scheme has been the subject of severe and justifiable criticism. It has not solved the intern problem. Perhaps it cannot.

It is easy to get the cart before the horse. Such is the case when the concept is held that hospitals are in being solely for the education of the intern. What about the patient? Does he not deserve some thought and consideration? Are we so befuddled by boards of every conceivable title, accreditation commissions, regulating bodies of all sorts that we are losing sight of the main objective—care of the sick?

When should a medical school and its faculty finally let the fledgling fly on his own wings? Must the responsibility to keep abreast of one's profession, to seek knowledge to pursue and acquire wisdom never be strictly up to the individual? The ever increasing skein of rules and regulations wound about the practice of medicine by specialty boards, hospital boards and bureaucrats of our own creation should give us pause lest individual inspiration and creativeness be choked off at the source. A young medical graduate should be free to wander about in the garden of medicine at least a little while before his vision is obscured by growing hedges. It is at the grass-root levels that the real growth takes place. County and state medical societies can and should make the needs of the people known. The health of the people is our supreme concern.

Once again, you see, I have touched on what is going to be the central thread of this talk. I think the threat of bureaucratic control and regimentation of the practice of medicine is the central danger to the profession in our time. I believe this danger is just as great whether the bureaucratic power involved comes from government or any other source. Bureaucracy is still bureaucracy whether its headquarters be Dearborn Street in Chicago or Capitol Hill in Washington.

The American Medical Educational Foundation, which has begun its far-reaching program of extending financial aid to medical schools, actually was conceived by the Missouri State Medical Association when a resolution was presented in an American Medical Association House of Delegates embodying this fundamental idea. The resolution was presented by Dr. Robert Schlueter in 1946. Since then the basic soundness of the concept has achieved universal recognition, and cooperation of the American Medical Association membership and that of the "allied medical care industry"— as well as that of industry in general—has been splendid. Some states have not done as well as others. Missouri is one of these.

We must take immediate steps to correct this deficiency. Missouri should not permit its own baby to languish. There is a booth at this meeting where all pertinent information can be obtained. Let us not be ungrateful for the blessings we have been permitted to enjoy through the knowledge transmitted by the light of the torch passed from the hands of our teachers and preceptors.

The problem of osteopathy in relation to the health of the people of Missouri has given your officers and councilors great concern during the last two years. A brief summation of our position relative to the Audrain County Hospital suit filed by its Board of Trustees is included in the report of the Council.

The ultimate solution of this problem will not be an easy one. It will require tolerance and wisdom of the highest order. This matter is not strictly a local concern. Many states, and particularly New York, are at present reexamining their laws governing those engaged in all the so-called "healing arts" and their ancillary technical occupations. The matter of fitting and proper statutory law to govern those whose occupations are directly related to the health care of the people of Missouri is of supreme importance. Such statutes should be explicit and strictly unambiguous, yet sufficiently all-inclusive, so that our citizens shall be afforded all the protection that the majesty of law can provide against the deceit and exploitation of quacks and charlatans who prey upon the gullibility and ignorance of their victims. This is not to say that gullibility and ignorance can ever be completely eliminated either by statute or by education.

The Missouri Assembly is considering a bill to create a commission to reexamine the laws of our state dealing with the "healing arts"—as well as all ancillary and allied groups who purport to alleviate human ailments. This commission composed of three members of the House, three Senators and three appointees of the Governor will have the power and necessary funds to investigate all phases of the education and qualifications of those who profess to treat the sick. The findings of the group should be embodied in a report which will provide the necessary facts upon which a comprehensive revision of the Missouri statutes can be based.

During the few years that I've been privileged to serve and observe, remarkable efforts have been made throughout Missouri by county societies to increase their professional and scientific efficiency by a policy of cohesion and cooperation. I refer to the many "hyphenations" of small rural county societies into a larger amalgamated group. Always a spirit of unity has emerged benefiting every member by virtue of better organization, improved scientific programs and a greater sense of responsibility for public relations problems.

The woman's auxiliaries of such groups have served as a stimulus in many ways, contributing to the varied aspects of social life in these communities, civic affairs and other important activities of good citizenship. Our state auxiliary, under the able leadership of Mrs. Richard Sutter, has worked hard this year and has done an excellent job. The Auxiliary's contribution to the overall public relations of medicine in Missouri has been very great.

Coming back to the hyphenation policy, I want to say it has been so beneficial to the areas involved throughout the state that this principle should be applied wherever the greatest good can be accomplished both for the local groups and Missouri medicine as a whole.

Is it too much to hope that one day St. Louis County and the St. Louis Medical Society might become amalgamated into one society which would then be better able to meet the needs of that large metropolitan area comprising as it does a great medical center situated in a large and important industrial community? It is a "connsummation devoutly to be wished."

At the national level important legislative steps have been taken. The Federal Security Agency has been elevated to cabinet status, including divisions of health, education and welfare. This is part of the Hoover plan of governmental reorganization. The American Medical Association has endorsed this move as a "step in the right direction," but has maintained its view that a separate Department of Health of full cabinet status is desirable.

As always, new legislation and administrative decrees of the various federal bureaus will bear watching. Eternal vigilance is still the price of liberty and freedom.

Each member of our Association should support the Keough-Jenkins Bills in Congress which provide more equitable tax for professional persons in purchasing retirement and annuity insurance programs. This legislation will abolish the injustice which prior tax laws have imposed on the self-employed professional, artist, writer or physician as compared with persons employed by corporations.

A brief comment on the tendency of certain detractors of our profession seems to me to be in order. Our leaders have urged us to contribute to funds for "public education," public relations and educational campaigns—supposedly to build up greater respect and confidence, on the part of the public, in our good works. Yet on a great many occasions those in high places have employed their eminence of position to cry aloud about the sins and iniquities of a few transgressors which we note among us.

The ophthalmologists were once greatly concerned about the "motes" and "beams." Then certain professors of surgery took to the scientific forums comments on the sins of a few. All of these wailings accomplish little good in comparison with the great harm that is done by causing the public, the patient, to doubt the integrity of his doctors.

"Who steals my purse steals trash . . . But he that filches from me my good name robs me of that which not enriches him, and makes me poor indeed."

Why public relations? Many of my colleagues have asked me! Perhaps Kipling had the answer which might apply to many of our self appointed detractors.

"We are very slightly changed
From the semi-apes who ranged
India's prehistoric clay'
Who so drew the longest bow,
Ran his brother down, you know
As we run men down today.

Thus, the artless songs I sing
Do not deal with anything
New or never said before.
As it was in the beginning,
Is today official sinning
And shall be forevermore."

We should therefore be reminded that human nature is the most unchangeable thing on this planet. Through most of recorded history mankind has found authority and compulsion in social institutions more congenial than freedom and individual responsibility. There will always be among us those who would turn again toward putting larger and larger areas of human activity into the straight-jacket of planning and bureaucracy.

We in the medical profession have special reason to be alert to this danger and vigilant to prevent it. I wish every doctor in Missouri would read with care the article of F. G. Dickinson in the March 21 issue of the *Journal of the American Medical Association*. In it Dr. Dickinson subjects to close and critical analysis the recent report of the Truman Commission on the Health Needs of the Nation.

There is time here only to quote the concluding paragraph: "This commission did not recommend a middle-of-the-road program and it did not accept the voluntary health insurance way to the solution of the health problems of our nation. Furthermore, the action of the commission in gently shelving for the time being compulsory health insurance does not, in the light of some of the other recommendations, provide anything more than window dressing. The fundamental direction of this report is socialistic in the modern, accepted version of that term, which no longer implies government ownership but taxes and regulations, and the harassment of individuals. Taken as a whole, this report should be filed away in the archives marked, 'Creeping Socialism.'"

Once more, it's the same old story. Here is another bureaucratic proposal to limit freedom for the purpose of social planning. The direction is always away from individualism and toward statism. There is no more basic problem before the medical profession today than to marshal every force it can muster to support the claim of the individual, both doctor and patient, for a maximum of independence from the control and direction of government.

And, as I have indicated before, it is not only government we have to fear. We see our whole society become bigger and more complex. We see business enterprises, labor organizations, yes, and even medical organization itself, become more and more institutional and, in some measure, bureaucratic.

The value that needs guarding today is the value of human individuality. It is individual men and women who are important in our tradition. And indi-

vidual sick men and women are the medical profession's whole reason for being.

We must resist every tendency, whatever its origin, that would take us in the direction of treating people like statistics, like units of a social machine. We must strive to maintain the person-to-person relationship of intimate humanity that is the very core of the treatment of the sick.

Let us remember the dangers. Let us remember that eternal vigilance is the price of freedom. And let us remember our paraphrase of the motto of the Great Seal of our great state: "The health of the people is our supreme concern."

May I conclude with expressing again my sincerest thanks for the honor you bestowed upon me by electing me President of the Missouri State Medical Association. Miss Helen Penn, Tom O'Brien, Ray McIntyre, Lemoine Skinner, the office force—all committee members, each and every one has responded nobly during a turbulent time in the affairs of our Association. Time has flown but work must go on—as it will.

"For you or me, do those who live decline
The step that offers, or their work resign?
Trust me, today's most indispensables,
Five hundred men can take your place or mine."

E. Claude Bohrer, M.D., West Plains, gave the Recommendations of the President-Elect as follows:

RECOMMENDATIONS OF THE PRESIDENT-ELECT

Mr. Speaker, Members of the House of Delegates: It is with a keen awareness of the honor and responsibility you have given me that I speak to you today. I want you to know, as your President, I shall do my very best in the year ahead.

A great number of difficult and complex questions will confront the medical profession of Missouri during the coming months. Answers to many of these questions will depend, to a large degree, on the uncertainties of outside developments. I shall not, therefore, attempt to present to you today a blueprint of specific elements for the year's program. The times, I believe, make necessary a program without hard and fast rules—a broad program that can be adapted to meet best the problems of our profession as they arise and to meet them with the clearest possible vision in the light of circumstances existing at the time.

In view of this, permit me simply to acquaint you briefly with the background of my personal thinking on a number of the important matters that confront us—a line of thinking that will have a bearing on some of the decisions to be made in the next year.

The basic point I want to touch upon is the doctor-patient relationship and the great way it affects everything we as a profession do and say in our efforts to safeguard our profession from government compulsion. We know of the great progress the American Medical Association has made in the fight against what we call the socialization of medicine. We are just as aware of the fact that the advocates of federal management of medicine will not relax their efforts. It should also be unnecessary to say that we must not be lulled into a sense of security and relax in satisfaction with past efforts.

The importance of maintaining the traditional close relationship between doctor and patient is at the foundation of the medical profession's position. Foremost in our minds now should be the strengthening of that foundation of the whole practice of medicine as we know it. Any breaking down of this relationship in individual doctors' offices or medical clinics can serve only to discredit our position in the public's eyes. The practice of medicine demands the meeting of people on a personal basis, not at the end of a belt-line of laboratories, technicians and nurses. This becomes all the more important to every doctor and to every patient in view of the increasing emphasis being placed on the psychic and emotional aspects of medical care.

Time, I grant you, is the biggest problem of every doctor. And proper personal contact with each patient takes a great deal of time. It is clear, however, that the people's continuing rejection of schemes for socializing our profession will depend much on the efforts of each of us to avoid the practice of mass medicine in our own individual practices—to develop a closer and closer spirit of friendly interest in our patients.

Another matter closely linked with the public relations of our profession is the shortage of medical doctors in rural Missouri. It is a situation that has led to much dissatisfaction in many parts of the state. It has led to an unusual growth of cultists and other groups of insufficiently trained practitioners in Missouri. The State Association, through its placement bureau, is doing an excellent job in interesting physicians in rural practice. We should encourage and aid this program in every possible way. Unfortunately, the need of the Armed Services for the younger doctors has curtailed this program during the last three years.

Until rural areas receive an adequate number of qualified doctors, our state will remain in the indefensible position of providing the rural citizen with a kind of medical care that cannot be compared with the quality of that received by his urban relative.

I want to point out here that rural communities must also be encouraged to do all they can to help us to help them. The individual community must recognize its responsibility in providing decent living conditions and facilities for the medical practitioner and his family.

To move to a brighter side of the picture in rural areas, all of us, I am sure, are heartened by the improved interest in out-state society meetings. Much of this is the end result of the combining of some of our county societies, a step that has brought new life and vitality to several old nonfunctioning bodies. We must continue to foster the process of hyphenation wherever it can be carried out effectively and wherever it will tend to make it possible for more doctors, through fewer but more valuable meetings, to keep in closer touch with advances in medical science.

There are two more major topics that need to be mentioned in connection with the basic responsibility of our profession to give to all the people of Missouri the highest possible quality of medical service. Both topics are in the area of controversy. Both involve complexities about which not all the members of the medical profession are in full accord. But they need mentioning at this time, because they are directly involved in the problems that will face us in the months ahead.

The first of these topics is the four-year school of medicine of the University of Missouri. It is important to emphasize that the medical doctors of the state have long been in almost unanimous agreement that our state university ought to have a full four-year medical school. It is equally true that there have been differences among us and with others as to the location which would give such a school the best opportunity to succeed in its essentially needed service of training doctors for the people of Missouri.

It now appears that we are going to have the school we have wanted. It appears, as well, that we are not going to have it on the basis advocated by the majority of medical men and by our Association. There are cogent reasons for the view that a medical school ought to be located in a major population center. Many of us believe that these reasons are compelling in their weight and force.

At this time, however, I wish to emphasize my personal view that the development of the school should have an over-riding priority in our thinking. The time has come for the medical profession to put first em-

phasis on helping to make the school succeed, whatever our views on the matter of location may have been or may continue to be. It is not my wish to put forward here a policy declaration in this most important matter, but simply to express my conviction that we shall do well to support the development of the school on whatever basis that development seems possible and feasible. The need of the school should be our foremost consideration.

Before leaving this topic, I want to say just one more word to express my personal satisfaction at the appointment of Dr. William A. Sodeman as head of the department of medicine of the new four-year school. Dr. Sodeman is an outstanding medical man and educator. His appointment, together with that of Dr. Roscoe L. Pullen as Dean, suggests to me that we may expect the highest kind of endeavor to make the school what all of us want it to be—a major center of medical education in the United States.

There is another important and controversial topic that demands a moment's consideration at this time. I bring it forward not because I have a precise solution to recommend, but because I believe deeply a solution must be found—not just in the interest of the medical profession, but in the interest of all the people of Missouri. I refer to the problem of standards for licensure and practice in health care in this state.

The present situation is absurd and dangerous. We see the side-by-side existence of licensed practitioners of the most widely different qualifications and abilities. We see a kind of publicly authorized quackery at the worst and at the best an acceptance of second rate standards.

There will be no final solution to this problem in Missouri until we achieve a single standard of qualification, and a single minimum level of competence on the part of all who are licensed to care for the sick. The concept of scientific medicine has surely come to a stage of maturity which no longer permits anyone to find a pretext for practice by persons who are anything less than fully trained and educated in the objective sciences of medical care. We can no longer view with complacency in Missouri an attitude toward health care that is a hangover from the prescientific past.

There is but one sound approach to medical practice and that is the thoroughly scientific approach. The time has come when our profession must give more affirmative leadership to see to it there will be just one standard high enough to qualify a man to practice in caring for the sick of Missouri. That standard must be the one we all know and recognize. It must be the standard of complete scientific training and demonstrated scientific competence. There should be no licensure of any kind for practitioners who cannot meet this standard.

I have now just a word or two more to say in this very personal assessment of the situation before us. I wish to express my gratification at the appointment of Dr. James R. Amos to continue as head of the State Division of Health. Dr. Amos has been an able successor to the late Dr. Buford Hamilton, whose passing we so regret. I believe I may pledge to Dr. Amos the continued cooperation of the Missouri State Medical Association in working with him for the betterment of the health of the people of Missouri.

Next I wish to emphasize our responsibility as doctors for the continued development of voluntary health insurance in Missouri. Blue Cross and Blue Shield continue to make forward strides. I believe we are all especially gratified at the steps taken recently to make this protection available to individuals. There is no element of our basic public relations program more important than making a continuing and growing success of voluntary prepayment health insurance. Every doctor has a personal stake in making voluntary prepayment succeed, both in our own medically sponsored nonprofit plans and in the programs of commercial insurance companies. The success of voluntary protection will take away the pretext of those who would impose a program of federal compulsion.

As I bring to a close these comments of my personal point of view on some of Missouri medicine's chief problems, I want to say a final word about the importance of the support we give our local, county, state and national organizations.

Medicine is changing rapidly, both scientifically and economically. It is through our organizations that we keep pace with everything that relates to the practice of medicine. It is through their function as forums for the exchange of medical knowledge that we are able better to serve the people, our traditional first responsibility. It is through our organizations that we take action, by every democratic process, on the problems before us. These organizations need your interest, your knowledge and, I believe, an increased measure of your financial support to meet the challenges that lie ahead—challenges to our sincerity of purpose, challenges to our intensity of effort. I am confident that in the spirit of teamwork that is a part of our association we have what it takes to meet these challenges. Thank you.

The Speaker was authorized to refer all reports to the appropriate Reference Committee, upon motion duly seconded.

The report of the Secretary, H. E. Petersen, M.D., St. Joseph, follows:

REPORT OF THE SECRETARY

On December 31, 1952, the official membership of the Association was as follows:

Status of Membership

Number of Members, January 1, 1952	3,546
New Members	202
Reinstated	9
Total	3,757
Dropped	13
Deceased	71
Transferred	57
Resigned	9
Number of Members, December 31, 1952	3,607

The Committee on Nominations, which is appointed by the President from the House of Delegates, must submit nominations for the following offices:

Three Vice Presidents to fill the vacancies created by the expiration of the terms of Clinton W. Lane, M.D., St. Louis; Peter T. Bohan, M.D., Kansas City; J. Will Fleming, M.D., Moberly.

Two Delegates and corresponding Alternates to the American Medical Association to fill the vacancies created by the expiration on December 31, 1953, of the terms of Robert E. Schlueter, M.D., St. Louis; Alternate, F. G. Pernoud, M.D., St. Louis, deceased; James R. McVay, M.D., Kansas City; Alternate, Rolla B. Wray, M.D., Nevada.

The terms (two years) of the Councilors of the even numbered districts expire this year: W. F. Francka, M.D., Hannibal, Second District; John O'Connell, M.D., Overland, Fourth District; R. W. Kennedy, M.D., Marshall, Sixth District; W. S. Sewell, M.D., Springfield, Eighth District; Frank W. Hall, M.D., Cape Girardeau, Tenth District. Delegates from these districts shall meet on the last day and elect the Councilor for their District. The election shall be certified to the House of Delegates on a prescribed form which will be furnished. Lists of Delegates from the various districts will be available to the Councilors at the Registration Desk.

The session will convene for four days, beginning

Sunday, April 26, at 2:00 p.m., with a session of the House of Delegates, and closing Wednesday afternoon, April 29. A session of the House of Delegates will be held Monday, April 27, at 4:00 p.m., and the final session of the House will convene at 1:30 p.m., on April 29.

The Annual Banquet in Honor of Past Presidents will take place on Tuesday evening, April 28, at 7:30 p.m. at Hotel President. There will be a dinner for Presidents, Secretaries and Editors of County Societies on Sunday, April 26, at 6:00 p.m.

H. E. PETERSON, Secretary.

The report of the Executive Secretary, Mr. T. R. O'Brien, follows:

REPORT OF THE EXECUTIVE SECRETARY

This is the seventh annual report submitted for your consideration. As in past years, it will be as brief as possible because the report of the Council and the various committees of the Association outline in detail the many activities. It seems well, however, to point out that the Field Secretary or I attend all meetings and endeavor to assist in carrying out the programs recommended.

I am sure that all of you appreciate the great amount of time that is devoted to state Association programs by the Officers and many of the members in Committee or Council work and I wish to offer my most grateful thanks to all of them for their understanding and help to the members of the staff.

The major activities of the Association follow the purposes for which it was organized; namely, the promotion of the science and art of medicine and the betterment of public health. Therein lies its real strength. We have been troubled with state and national issues affecting the practice of medicine but the overall purposes of the Association have remained unchanged. No matter how these purposes are expressed, they have been the means of assuring the people of the best health care known to man.

The increase in the number of meetings where the latest advances in medicine are brought to the attention of the members so that they may become more proficient in their efforts to cure the sick and eliminate disease should bring a large measure of satisfaction to all.

It probably is unnecessary to mention that many excellent scientific and technical exhibits will be shown at the Annual Session. Intermission periods are provided for your convenience in visiting them. The revenue received from the technical exhibits will go a long way toward defraying the overall expenses of the Annual Session.

We have been asked at times "what is the most important project of the Association?" It is not easy to answer because all of the activities represent an effort on the part of the Association to carry out its original purpose. There is no phase of medicine overlooked in this effort.

The personnel of the office, Mr. Ray McIntyre, Miss Helen Penn, Mrs. Gloria Luecke, Miss Marie Schmoele, Mrs. Bertha Thomas and Mrs. Marguerite Harris, are devoted and loyal to your interests and I wish to express my personal thanks to all of them for their efficient help.

T. R. O'BRIEN.

The report of the Treasurer, C. E. Hyndman, M.D., St. Louis, follows:

REPORT OF THE TREASURER

The report of the Treasurer is covered in the Financial Statement of the Association for 1952 which appeared in the April issue of THE JOURNAL. Since Delegates have had that issue of THE JOURNAL, the report is not repeated in these reports but Delegates are referred to THE JOURNAL.

C. E. HYNDMAN, Treasurer.

The report of the Committee on Scientific and Postgraduate Work, Ralph R. Coffey, M.D., Kansas City, Chairman, follows:

REPORT OF THE COMMITTEE ON SCIENTIFIC AND POSTGRADUATE WORK

The number of medical meetings in the state since the 1952 Annual Session has been more than sufficient. In support of this statement, consider the following meetings:

1. 9th Councilor District, April 24 and October 16.
2. 10th Councilor District, April 30 and October 9.
3. 2nd Councilor District, May 28 and November 6.
4. 4th Councilor District, June 5 and October 14.
5. 5th Councilor District, June 18 and October 23.
6. 6th Councilor District, June 26 and October 23.
7. 8th Councilor District, November 6.
8. 1st Councilor District, November 13.
9. St. Joseph Clinical Society, April 24.
10. Mississippi Valley Medical Association, St. Louis, September 30 to October 2.
11. Kansas City Southwest Clinical Conference, October 6-9.
12. Clay County Medical Society Clinical Conference, November 6.
13. A six session postgraduate course, October 1952 through March 1953, in St. Joseph, sponsored by the Buchanan County Medical Society in cooperation with the Kansas University Medical School.
14. A six session postgraduate course, October 1952 through March 1953, in Joplin, sponsored by the Jasper County Medical Society in cooperation with Kansas University Medical School.
15. A series of five postgraduate evening meetings, September 1952 through January 1953, at Louisiana, Cape Girardeau, Kennett, Rolla, Columbia, Chillicothe, Warrensburg, Nevada and Springfield, sponsored by the Missouri Academy of General Practice in cooperation with the medical schools of the University of Missouri, St. Louis University and Washington University, with speakers also from Cape Girardeau, Jefferson City, Joplin, Kansas City and St. Joseph.
16. A postgraduate course in St. Louis and Kansas City sponsored by the St. Louis and Kansas City Academies of General Practice respectively during the fall and winter months.
17. Fall and winter postgraduate course of the General Practitioner Study Club of Greater St. Louis.
18. The monthly postgraduate meetings of the Franklin-Gasconade-Warren Chapter of the Missouri Academy of General Practice.
19. American Academy of General Practice, St. Louis, March 23 to 26, 1953.

In addition to these meetings many county medical societies meet at stated intervals and present scientific programs.

Jackson County Medical Society and St. Louis Medical Society are Councilor Districts in themselves so that their scientific sessions may all be considered district meetings. The addition of many specialty group meetings and hospital staff sessions add to the grand total.

The Committee feels that it would be well to have fewer and better medical meetings. Greater effort needs to be made in combining and coordinating meetings where feasible.

More than one hundred medical speakers, under the auspices of this Committee, have appeared on various scientific programs throughout the state since the 1952 Annual Session.

The evening programs for the 1952 fall Councilor District meetings were cooperative endeavors of the Civil Defense Agency of Missouri, the Medical Schools

of St. Louis University, Washington University and Kansas University with the State Medical Association.

The Committee takes this opportunity to express its thanks and appreciation to all physicians who have given of their time and substance to promote the postgraduate training program.

The Committee completed the arrangements for the Annual Session at Kansas City with, what is thought, a well balanced program made up of a larger number than usual of distinguished guests from outside of the Association membership. The consensus of the Committee was that men from outside the Association would attract a higher attendance at the meetings. There are ten guests from out of the state and twenty-four Missouri physicians on the program. The project, started in St. Louis, of having round table luncheon discussions is being continued and every effort will be made to presell the luncheon tickets as the members register. The Committee asks the help of the delegates and officers of the Association to increase the attendance at the various scientific sessions by being present themselves at all possible scientific sessions and round table luncheons and by encouraging others to such attendance.

Arrangements have been made for the showing of the new three dimensional films shown by Ethicon Laboratories which include two excellent films, one by Dr. Brian Blades, a former Missourian, and the other by Dr. Sam Marshall, of the Lahey Clinic. These are in addition to other standard type training films shown before each session.

It is the belief of the Committee that this is a well balanced program.

Ralph R. Coffey, M.D., Chairman,
Wm. P. Maddux,
Daniel L. Sexton,
Kenneth Glover,
M. Pinson Neal,
Joseph L. Fisher,
Paul O. Hagemann,
Carl R. Ferris,
Walter W. Tillman,
F. R. Crouch,
John O'Connell.

The report of the Committee on Publication for the year 1952, R. O. Muether, M.D., Chairman, follows:

REPORT OF THE COMMITTEE ON PUBLICATION

January 1, 1952, to December 31, 1952

The 49th volume of The Journal was completed with the December 1952 issue. During 1952 there were published in The Journal forty-three scientific articles, twenty-one special articles, eleven postgraduate reviews, three clinical pathologic conferences, sixteen case reports, twenty-four editorials, fifty-five news items, twelve reports of the Field Secretary, twelve President's pages, eighty-five obituaries, twenty-six miscellaneous articles, two hundred thirty-one new members, one hundred society proceedings, nine correspondence, two reports from the Woman's Auxiliary, four articles on legislation, nine organization activities articles, three articles from the Division of Health and thirty-six book reviews. There were 628 reading pages and 408 pages of advertising and twelve insert advertisements.

Advertising in The Journal from January 1, 1952, to December 31, 1953, earned $20,411.29. Subscriptions of nonmembers amounted to $241.30, making $20,652.59 earned by The Journal. The cost of production of The Journal (printing and illustrations) was $21-273.86.

R. O. Muether, Chairman,
V. T. Williams,
H. E. Petersen,
M. D. Overholser,
Paul O. Hagemann.

The report of the Committee on Defense, C. E. Hyndman, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON DEFENSE

April 1, 1952, to April 1, 1953

Cases pending April 1, 1952	3
New cases during the year	0
Cases settled during the year	0
Cases pending April 1, 1953	3

C. E. Hyndman, Chairman,
O. B. Zeinert,
L. P. Forgrave,
Roland S. Kieffer,
James H. O'Neil.

The report of the Committee on Public Policy and Public Relations, W. F. Francka, M.D., Hannibal, Chairman, follows:

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND PUBLIC RELATIONS

During the last year, the Committee functioned more or less continuously as a policy reference group for the Council, as was contemplated two years ago when its membership was reconstituted. The chairman conferred frequently with the Association's public relations counsel on current projects. A meeting of the Committee was held in St. Louis on January 18, 1953, for the purpose of reviewing public relations activity and recommending future courses.

In general, public relations activity continued to be directly related to the overall program of the Association, and our public relations agency continued to serve in a consultant capacity under the state office and as a practical service facility to aid the Council, officers and committee chairmen on particular communications projects.

The year saw further development of the news letter of the Executive Secretary, which the Committee feels is filling a real need in bringing more directly to the whole membership a fuller awareness of the scope of MSMA's work and of particular problems as they arise.

Worthy of special mention in this report is the presentation made by President J. William Thompson before the President's Commission on the Health Needs of the Nation on September 15, 1952. The text of this statement was printed in The Journal.

A picture of the general range of public relations activities in the year may be seen in the two volumes submitted as exhibits with this report. One of these contains the full program of publicity developed in connection with last year's Annual Session.

It is interesting to note that one of the projects under study by the Committee at the end of the last program year was referred to the AMA for consideration, and the project has since been completed by the national public relations office. This was preparation of a handbook for the doctor's secretary.

At its meeting in January the Committee directed the preparation of a general public relations outline suitable for adoption in whole or part by particular county societies. Our public relations agency is currently assembling materials on programs and projects that have proved valuable at the county level elsewhere and is preparing the general outline for review by the Committee and submission to local societies. In this connection, the Committee wishes to thank the Cole County Medical Society for the initiative and interest it has shown in the matter. It is the recommendation of the Committee that this project be carried forward as a major element of the MSMA public relations program in the coming year.

For the rest, it is the view of the Committee that our present practical and limited activity in the public

relations field is sound in relation to the overall program of the Association.

W. F. FRANCKA, Chairman,
J. W. THOMPSON,
E. C. BOHRER,
J. W. ALLEE,
G. W. WINN.

The report of the Committee on Medical Education and Hospitals, R. M. S. Barrett, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

No question pertaining to hospitals nor to medical education was referred to this Committee during 1952.

R. M. S. Barrett, Chairman,
JOHN S. KNIGHT,
M. K. UNDERWOOD,
W. J. FERGUSON.

The report of the Committee on Cancer, E. C. Ernst, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON CANCER

Various efforts have been directed in the past toward broadening the scope and responsibility of the State Cancer Committee relating to the State Cancer Program in cooperation with the State Division of Health and the Missouri Division of the American Cancer Society. The Cancer Committee early realized that this could only be achieved if and when the necessary broader directives were contained in revised by-laws of the Missouri Division of the American Cancer Society through the efforts of the Board of Directors representing all of the counties within the nineteen districts of the state, one of the many desired changes related to the personnel of the Medical and Scientific Committee of the Missouri Division; directly affecting the reorganization and coordination plans of the Missouri Division with the various county societies and the local physicians interested in cancer. In this the new executive vice president of the Missouri Division of the American Cancer Society, Mr. Harry Dawdy, is playing a most important liaison role in his contacts with the county societies or local medical groups.

Medical and Scientific Committee: (Cancer Committee): The responsibilities or scope of activities of the medical and scientific committee of the Missouri Division, which, in reality, is the Cancer Committee of the State Association were specifically outlined in the new by-laws of the Missouri Division of the American Cancer Society, as follows:

1. The Medical and Scientific Committee of the American Cancer Society shall include the members of the Cancer Committee of the Missouri State Medical Association with such other medical and scientific personnel as the chairman and president may choose for the promotion and study of all divisional projects involving the detection, diagnosis and treatment of cancer, or relating to medical services or research in connection therewith, and the planning and supervising of all divisional projects connected with the dissemination of professional information.

2. The Committee on Cancer is appointed by the President of the Missouri State Medical Association to insure proper geographical representation of areas of professional interest. Appointments should be staggered to insure continuity of committee activity.

3. This Cancer Committee also serves as the Medical and Scientific Committee of the American Cancer Society- Missouri Division; and advisory committee to the Missouri Division of Health, and the Bureau of Cancer Control.

In view of these new organization developments a meeting of the Cancer Committee was held in Jefferson City on Sunday, February 15, for a discussion of these and other proposed coordinated overall state cancer programs to which the officers and councillors of the State Medical Association were invited, including the officers of the Missouri Division of the American Cancer Society and the Missouri Department of Health and Welfare, Division of Health.

Coordinated State Cancer Program: The proposed coordinated program related to: (1) Organization, (2) public education, (3) professional education, (4) medical service, (5) cancer research. With few minor exceptions, the entire state cancer program was acceptable to the Missouri Division of Health, the Missouri Division of the American Cancer Society as proposed by the Cancer Committee. Specific individual responsibilities were outlined in this proposed cancer program but limited in their scope to conform with the wishes of the local medical units or county medical societies. This fulfills some of the recommendations made in previous reports presented by the Cancer Committee. The question of state-wide cancer registration and other minor subjects were discussed and deferred for future consideration.

Detection Clinics: The recent decision by the Board of Regents of the American College of Surgeons to discontinue inspection of cancer detection centers as of August 1, 1953, was discussed by the Cancer Committee. The Board of Regents further recommended that the College be clearly on record as not interpreting this action as indicating disapproval of existing cancer detection centers, nor the principle of cancer case findings.

In view of this decision, the Committee will continue to recommend the cancer detection center as operated in Kansas City, but will intensify their efforts throughout the state of interesting the physicians to step-up their detection of cancer activities in their own offices.

Reporting of Cancer End Results: The Cancer Committee and other national scientific societies have observed the increasing lack of uniformity in statistical reporting of cancer end results, which has been a source of worry to clinicians and research workers seeking to scientifically evaluate from published reports the benefits of a specific therapy method. It has become increasingly obvious that two different series of cases can be compared only if the same system of analysis is used in both. In this annual report, it was thought advisable to discuss certain phases of this problem in view of the many reasons which have been advanced for correctly reporting cancer end results. First of all, the comparison of the effectiveness of surgical, medical or radiologic methods of treatment in achieving permanent results should be satisfactorily answered. Secondarily, the committee is equally interested in an analysis of histologic, size, type and extent of the lesion, evidence of metastasis, the radiation symptoms, age and condition of the patient.

It should be realized that the effectiveness of surgical, radiologic or hormone treatments—singly or in combination—as employed by one doctor, cannot be compared with the effectiveness of an alternative treatment method used by another clinic unless the end results are analyzed in exactly the same way for a similar stage or group of cases. It has been the experience of most that widely different cure rates are published for what appears to be the same type of cancer and it is frequently impossible to tell whether the differences are due to variations in the method of treatment or whether they are due to variations in the method of reporting the end results.

Some doctors or clinics see a larger percentage of advanced or recurrent referred cases, while other physicians see a preponderance of relatively early cases, but refer their advanced cancer cases for treatment elsewhere. Others report only hopeful cases. A few present all cases treated, whether hopeful or not, and a few report all cases seen including those not treated. Furthermore, inadequate follow-up may be a

factor in changing the statistical ratio. Survival rates are usually based only on those cases which were followed, but frequently no mention is made of those which were lost in the follow-up. Five year cancer cures are distinguished from five year cancer survivors by the fact that the former patients are alive and found to be free of cancer five years after diagnosis, while the latter are all cases which are alive five years later and still have cancer. While both five year cure rates and five year survival rates are useful, serious error results in mislabeling or failure to specify clearly which of the two is meant. Many efforts in the past by national and international committees have failed to clarify the reporting of cancer end results. In the latter part of 1950, the American College of Surgeons, the American College of Radiology, the College of American Pathologists, the American Cancer Society and a member-at-large from the National Cancer Institute decided to appoint individual committees to study this problem and make recommendations. A joint committee for reporting cancer end results just concluded this study and not only made recommendations but adopted rules and standard forms designed for the presentation of minimum basic information to meet this challenge of more effectively reporting cancer end results. It was emphasized that the investigator is supposed to give additional information in supplementary tables in the text. This will give the reader the necessary data to make analyses most suitable for the purpose he has in mind; for example, the reader will be able to compute five year cure rates or five year survival rates as he sees fit. The more important rules and recommendations for reporting five year end results for persons with malignancy are enumerated as follow:

1. Include all cases diagnosed as having a malignant neoplasm, whether treated or not. Whenever possible, all cancers should be classified as to the site of origin.
2. Cases reported should be divided into two Sections, A and B, as defined.
3. Section A. Cases not previously treated. The duration of these cases is measured from the date of the original diagnosis of this cancer.
4. Section B. Cases previously treated. The duration of these cases is measured from the beginning of subsequent treatment.
5. The total number of cases in Section A and the total number of cases in Section B should always be reported. However, if the investigator so desires, he may report the full details for one of these two sections only. It is generally desirable to report every case from the date of original diagnosis until the end of the five year period. If this is done, then all cases will fall in Section A. The detailed tabulation of Section B. cases is designed primarily for those investigators who wish to report on the efficacy of treatment in recurrent cases of cancer.
6. Include only cases with an elapsed duration of at least five years. Report the status of each patient on the fifth anniversary. Each patient should be examined at least yearly.
7. The condition of patients classed as alive and free from cancer must be established through examination by a physician at the end of the five year period or a later date.
8. The percentage of cases with a microscopically confirmed diagnosis is a measure of the accuracy of diagnosis. This percentage should be as high as possible; however, cases without microscopically confirmed diagnosis should be included but shown separately.
9. Whenever possible, an autopsy should be performed. A high degree of accuracy requires that autopsies be performed at least on all those patients who die before the end of the five year period.
10. The percentage of cases untraced for the full five years should be as close to zero as possible. If it is greater than 10 per cent, the report will be of doubtful validity.
11. In reporting on cancer of a given primary site, patients will be classified according to the status of that disease. If a new primary histologically proven cancer develops, it should be considered as an intercurrent disease even though it may cause the death of the patient.
12. It is most important that the report should include all the basic data shown on the two page printed cancer forms which can be obtained from members of the Cancer Committee, Missouri Division of the American Cancer Society, or the Secretary of our Society. A statistical study of cancer end results of the cervix uteri, employing these forms will be published in an early issue of the Journal of our Society.

Edwin C. Ernst, Chairman,
Everett D. Sugarbaker,
E. Kip Robinson,
Marvin L. Napper,
Thomas Martin,
Jack H. Hill,
Frederick J. McCoy.

The report of the Committee on Medical Economics, A. P. Rowlette, M.D., Moberly, Chairman, follows:

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

The Committee is pleased to submit the following information regarding the Blue Cross and Blue Shield Plans of the state.

Kansas City Blue Cross

Membership, December 31, 1951	330,143
Membership, December 31, 1952	335,059
Reserve per agreement, December 31, 1952	$6.99
Reserve per participant, December 31, 1952	$3.18
Number of cases hospitalized	56,266
Number of days hospitalization	366,816
Average days stay for year	6.5
Amount paid hospitals during year	$4,535,396.10

Kansas City Blue Shield Surgical Medical Care

Membership, December 31, 1951	301,293
Membership, December 31, 1952	309,566
Reserve per agreement, December 31, 1952	$5.43
Reserve per participant, December 31, 1952	$2.47
Number of cases paid for during year	114,695
Amount paid to participating physicians during year	$3,008,905.80

St. Louis Blue Cross

Membership, December 31, 1951	1,038,408
*Membership, December 31, 1952	815,943
Reserve per agreement, December 31, 1952	$6.77
Reserve per participant, December 31, 1952	$2.87
Number of cases hospitalized	131,979
Number of days hospitalized	957,811
Average days stay per year	7.3
Amount paid hospital during year	$10,760,484.00

Missouri Medical Service (Blue Shield)

Membership, December 31, 1951	299,093
Membership, December 31, 1952	335,904
Reserve per agreement	$4.42
Reserve per participant	$1.94
Number of cases paid	48,080
Amount paid during year	$2,516,208.00

The Committee was asked by the Council to study proposed legislation regarding Blue Cross and Blue Shield as submitted by the Kansas City plans. A report of the Committee's findings and recommendations was submitted to the Council.

The Committee was requested to study the manner

* The decrease in membership is due to the transfer of the Alton Plan members and the Illinois Members of the St. Louis Plan to the Chicago Plan.

in which indigent care is provided in university hospitals in other states. Information has been obtained from several neighboring states in addition to programs reported in the *Journal of the American Medical Association*. It is hoped that the study may be completed sometime during 1953.

A. P. ROWLETTE, Chairman,
E. ROYCE BOHRER,
C. T. HERBERT,
ARTHUR B. SMITH,
B. L. SINNER.

The report of the Committee on Maternal Welfare, Kenneth E. Cox, M.D., Kansas City, Chairman, follows:

REPORT OF THE COMMITTEE ON MATERNAL WELFARE

The Committee met in Jefferson City, February 15, 1953. Those present were Drs. Kenneth E. Cox, Kansas City, Chairman; E. Lee Dorsett, St. Louis; E. E. Wadlow, St. Joseph; J. L. Johnston, Springfield; William See, Columbia; H. C. Wasserman, William D. Hawker and Carl R. Wegner, St. Louis, members of the St. Louis Gynecological Society; James E. Keeler, Kansas City, member of the Kansas City Gynecological Society; L. M. Garner and James R. Amos, Jefferson City, of the Division of Health; Mr. T. R. O'Brien, Executive Secretary, Missouri State Medical Association.

The Committee is implementing its study and analysis of the causes of maternal deaths in the state. In spite of there being only 69 deaths reported in Missouri in 1951, the latest year for which data is complete, the Committee feels that many of the deaths were preventable and that a review of the deaths by the physician and the Committee will determine contributory causes, as it has done with similar surveys in other states.

The St. Louis and Kansas City Obstetric and Gynecologic Societies have been studying these deaths in these two cities but the Committee believes that a statewide plan of analysis would furnish information whereby education of physicians, hospital personnel and expectant mothers will further reduce the number of maternal deaths.

The plan of the Committee was decided upon as dividing the state into two sections, with the secretaries of the two societies working with the Committee on Maternal Welfare to obtain the information and review the cases. An analysis form was approved by the Committee for the reporting of the death and it is expected that this form may be used by all M.D.'s in the state who have a maternal death. The physician will be contacted by the State Committee and a member of one of the two societies will furnish him the analysis form for pertinent information on the case. The work began as of January 1, 1953, most of the cases occurring so far in this calendar year having already been reviewed.

The Committee will work in close cooperation with the Division of Health in this work.

The Committee hopes that the study eventually may cover all maternal deaths in the state; also the Committee hopes at a later time to cooperate with the Committee on Infant Care for studies in the care of the premature newborn and infant mortality.

The Committee recommends to the House of Delegates that this work of the Committee be approved and that members of the House encourage members of their constituent societies to work with the Committee in this study.

KENNETH E. COX, Chairman,
E. LEE DORSETT,
LEO J. HARTNETT,
J. L. JOHNSTON,
E. E. WADLOW.

The report of the Committee on Infant Care, Daniel B. Landau, M.D., Hannibal, Chairman, follows:

REPORT OF THE COMMITTEE ON INFANT CARE

The Committee on Infant Care of the Missouri State Medical Association held no formal meetings. The work of the Committee was carried out by correspondence.

Observers were present at meetings of the Missouri Association of Social Welfare. A report on these meetings and recommendations of the Committee were presented to the Council of the Missouri State Medical Association at its June meeting.

The Committee had representatives who met with Drs. Garner and Belden of the Division of Health for revision of the Public Health Manual (Control of Communicable and Other Diseases Dangerous to Public Health).

The Committee collaborated with Drs. Garner and Amos in revising the Immunization Schedules for the County Clinics throughout the state, bringing them up to date.

Feeding schedules for these clinics were also revised and improved.

The Infant Care Committee, with the Missouri Chapter of the American Academy of Pediatrics, conducted a survey of available beds for chronically ill children in the State of Missouri.

DANIEL B. LANDAU, Chairman,
R. J. LADRIERE,
EUGENE J. SCHWARTZ,
GEORGE V. HERRMAN,
H. E. PETERSEN,
J. S. SENNOTT,
GUY N. MAGNESS.

The report of the Committee on Health and Public Instruction, A. W. McAlester, III, M.D., Kansas City, Chairman, follows:

REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

This year the Committee in cooperation with the State Association's Committee on Alcoholism presented an educational exhibit at the Missouri State Fair in Sedalia. The 1952 fair exhibit was borrowed from the Bureau of Scientific Exhibits of the American Medical Association and was entitled "Testing the Drinking Driver." The interest shown by the fair visitors in this particular exhibit was exceptional. The Committee feels that the State Fair offers a unique medium for disseminating information to the public, be it on health matters or on raising chickens. It is suggested that county medical societies, in localities in which county fairs are held, explore the possibility of presenting exhibits at these various county expositions. The Woman's Auxiliaries of such county societies may well be approached for assistance in these projects.

The Committee has been called upon many times throughout the year to furnish medical speakers for civic clubs, P.T.A.'s and other similar group meetings. These requests have all been filled.

More and more of the County Society Auxiliaries are promoting health forums open to the public and health day teas and luncheons through invitations. This Committee, through the Association headquarters office, has furnished medical speakers for a good number of these occasions. Some of the Auxiliaries have arranged with local radio stations for regularly scheduled broadcasts of health educational programs. Other such programs are being sponsored directly by county medical societies over the state. The Committee recommends that other medical societies in counties in which there are radio stations consider the advisability of, either directly or through their Auxiliaries, arranging health and education broadcasts with these

stations. The Bureau of Health Education of the A.M.A. has numerous series of good health education transcriptions for radio. These are easily secured from the A.M.A. and are adaptable to local usage.

The Committee would like to recommend at this point that all county medical societies composing the Missouri State Medical Association take greater cognizance of the potential public service value in health education and good will of their Woman's Auxiliaries.

A. W. McAlester, III, Chairman,
J. Earl Smith,
Rolla B. Wray,
George A. Kelling,
Claude J. Hunt.

The report of the Committee on Constitution and By-Laws, Durward G. Hall, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

The Committee on Constitution and By-laws, both in session and by correspondence, has studied the Constitution and By-laws as adopted by the House of Delegates at the 94th Annual Session held in St. Louis, March 30 to April 2, 1952. The Committee has approved in general the By-laws which were adopted.

However, in the study by the Committee, several features were pointed out and it is the feeling of the Committee that certain changes should be made. Therefore the Committee recommends to the House of Delegates of the 95th Annual Session that the following amendments be made:

Amend Chapter I. Membership. Section 1, by adding the following words after the word "Missouri": "except as otherwise provided" so that Section 1 shall read: "Section 1. Members of this Association shall be physicians whose names have been certified by secretaries of component societies to the Secretary of this Association that they are duly elected members of a component society and are legally qualified physicians practicing in Missouri, except as otherwise provided. Each member must be a citizen of the United States, of good moral and professional standing, and must not support, nor practice, nor claim to practice any exclusive system of medicine."

Amend Chapter I. Membership. Sec. 3 by deleting the word "four" and inserting in lieu thereof the word "three," so that the section shall read: "Sec. 3. There shall be three classes of members as follow: . . ."

Amend Chapter I. Membership. Sec. 3 by deleting the last paragraph beginning "Associate members . . ."

Amend Chapter I. Membership by adding a Section 4 which shall read: "Sec. 4. Associate members shall be limited to persons not provided for in the various classes of membership who are engaged in the pursuit of a medical or allied science and, by action of the component societies, become Associate Members of the Association. This shall include physicians who meet medical examiners' qualifications but have not received their citizenship, these Associate members to apply for Active membership within one year after citizenship is granted. Associate members shall have the right to attend scientific sessions and such other privileges as may be extended to them by the House of Delegates. They shall not be eligible to vote and shall be exempt from the payment of dues."

These changes are suggested, based principally on the position of the deposed physician who is denied association with his profession for the five year period while he establishes citizenship.

It is recommended to the House of Delegates that Chapter IV. Election of Officers. Sec. 4 be amended by adding the words "or before" preceding the words "the morning of the last day . . ." so that when amended the section shall read:

"Chapter IV. Election of Officers. Sec. 4. Delegates present at the Annual Session from Councilor Districts whose Councilors' terms expire shall hold meetings on or before the morning of the last day of the Annual Session and elect a Councilor for their District for a term of two years. The name of the elected Councilor shall be given on a prescribed form to the Secretary for presentation to the House of Delegates. Each candidate for Councilor must reside or practice in the district for which he is elected."

This amendment, the Committee felt, would clarify the election of Councilors to an extent that the former "Rules and Regulations" would not be necessary further.

Durward G. Hall, Chairman,
W. L. Allee,
Paul Baldwin,
Hubert M. Parker,
Curtis H. Lohr.

The report of the Committee on Fractures, Daniel L. Yancey, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON FRACTURES

The Committee on Fractures of the Missouri State Medical Association held two meetings during the year of 1952.

The first meeting was held during the Missouri State Medical Association meeting in St. Louis, at the Jefferson Hotel on March 31, 1952, and the second meeting was held on November 24, 1952, in St. Louis. Each meeting was held in conjunction with the Missouri Regional Committee on Trauma of the American College of Surgeons, both of these committees having coordinated all their activities during the last few years.

During the last year, with the cooperation and advice of these two committees, the Zimmer Manufacturing Company has prepared an emergency splinting kit containing four half ring leg splints (two adults, one medium and one child), four traction hitches, four heel rests to support the end of the splint and two dozen triangular bandages. An emergency dressing kit also has been prepared containing four dozen sterile gauze 4 by 4 pads, one dozen 3 inch roller bandages, two dozen triangular bandages and two large size sterile burn dressings. Each kit is enclosed in a suitable, durable and waterproof carrying case and each is arranged so that it can be carried easily in an automobile. It is the Committee's desire to place the splints and dressing kits in the Missouri State Patrol Cars and also in all ambulances transporting injured persons which do not at the present time have splinting and emergency dressing kits.

The Scientific Exhibit on Fractures, first inaugurated in 1951 at Kansas City, was again presented in St. Louis at the Missouri State Medical Meeting, March 30 to April 2, 1952, which was well received and was given honorable mention. An exhibit will be presented again this year at the 1953 meeting in Kansas City.

The next meeting of the Committee on Fractures of the Missouri State Medical Association will be held in conjunction with the Missouri Regional Committee on Trauma of the American College of Surgeons in Kansas City during the meeting of the State Association. All interested members of the State Medical Association are welcome to attend this meeting.

Daniel L. Yancey, Chairman,
W. J. Stewart,
N. S. Pickard,
W. R. Bohne,
Carl M. Fellhauer,
Jacob Kulowski,
B. L. Murphy,
Richard H. Kiene,
Thomas G. Otto.

The report of the Committee on Conservation of

Eyesight, C. Souter Smith, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON CONSERVATION OF EYESIGHT

The Committee on Conservation of Eyesight has held two meetings during the year, both on specific studies. It carried out an investigation at the request of the Council on a situation on eye disease in the state which was brought to the Council. The Committee completed its work and reported to the Council at an early meeting this year.

A second meeting was held to study legislation which dispensing opticians in the state were preparing for presentation in the Legislature. Recommendations were made to the dispensing opticians and also recommendations were made to the Council for its action, which was to approve such legislation licensing dispensing opticians with certain restrictions placed in the bill.

The Committee is continuing its work on the testing of vision of school children.

The Committee again feels that it will not sponsor legislation on driving tests that will emphasize eyesight but will take an active interest in any such legislation that may be presented.

Cooperation with the Missouri Bureau for the Blind has been maintained; also the Committee has established liaison with the Missouri Committee of the National Society for the Prevention of Blindness.

C. SOUTER SMITH, Chairman,
ROBERT D. MATTIS,
W. L. POST,
A. N. LEMOINE,
H. B. STAUFFER,
JOHN MCLEOD,
G. J. TYGETT,
GEORGE HORNBACK,
C. H. BRADY,
THEODORE E. SANDERS.

The report of the Committee on Venereal Disease, A. W. Neilson, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON CONTROL OF VENEREAL DISEASE

The Committee on Control of Venereal Disease, working in conjunction with the Missouri Division of Health, was instrumental in having a display built for exhibition at medical meetings. The exhibit consists of three panels and portrays current information on the incidence, diagnosis and treatment of syphilis. The middle panel contains an automatic projector for kodachrome slides. Early and late syphilitic lesions are automatically projected for viewing.

The exhibit was well attended at its first showing during the Mississippi Valley Medical Society meeting in St. Louis, October 1 to 3, 1952. The exhibit was displayed at the national general practitioners' meeting in St. Louis, March 23 to 26, 1953, and at the Missouri State Medical Association meeting in Kansas City, April 26 to 29, 1953.

The Midwestern Medical Center, St. Louis, was closed to patients on August 1, 1952. The facilities of the Center were replaced gradually during 1952 by a plan for paying practicing physicians on a fee basis for the treatment of indigent patients with syphilis or gonorrhea. This program was endorsed by the Committee and is administered and financed by the Division of Health. During 1952, 192 cases of syphilis and 47 cases of gonorrhea were treated and fifteen spinal tests were done under the provisions of this program.

The number of cases of syphilis reported in Missouri (excluding military) in 1952 indicates that the decline which began after World War II is continuing. There were 4,741 cases reported in 1952 compared with 5,160 in 1951. The drop in reported cases of primary and secondary syphilis is more impressive—212 in 1952 compared with 420 in 1951. Reports of congenital syphilis numbered 198 in 1952, the lowest in recent years. Since venereal disease case finding in Missouri is still relatively active, it is reasonable to assume that the favorable picture of syphilis is real rather than an illusion resulting from lack of interest and neglect.

Gonorrhea reports for 1952 (4,367) were slightly in excess of those for 1951 (4,261). The more widespread acceptance of the practice of treating gonorrhea on evidence of contact with the disease and on clinical grounds may account for the continued relatively high incidence of this disease.

A. W. NEILSON, Chairman,
E. M. CANNON,
J. G. SICELUFF,
JAMES C. COFER,
CHARLES C. DENNIE,
R. J. MURPHY,
JAMES C. COPE.

The report of the Committee on Industrial Health, H. M. Roebber, M.D., Bonne Terre, Chairman, follows:

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health met in St. Louis on February 25.

The pamphlet "Essentials of Medical Nursing Services in Industry" was considered and approved by the Committee. The pamphlet contains a joint statement of the American Association of Industrial Nurses, the Industrial Medical Association and the Council on Industrial Health of the American Medical Association. It was published in the J.A.M.A. June 7, 1952.

The Committee agreed to continue efforts to interest medical schools in problems of industrial medicine at the undergraduate level. Several medical schools have started special courses in the field of industrial hygiene and it is hoped that schools in Missouri eventually will do so.

The Committee considered H. B. 175 which redefines a "major employer" as one who has more than five (instead of ten) employees regularly employed. The Committee believes that many physicians would be affected by this act in that they would be required to carry compensation insurance and therefore recommends that the act be opposed.

H. B. 184 amends the Compensation Act by providing that the employee would have free choice of physician or surgeon. It was pointed out that, if enacted, this law would permit the use of osteopathic or chiropractic physicians. Therefore, the Committee recommends that H. B. 184 be opposed.

The Committee examined Sections 287.140 and 287.141 of the Laws of Mo. 1951, pages 613, 614, 615, relating to Workmens Compensation and recommends that legislation be drafted to eliminate subsection 8 of Section 287.140 and that Section 287.140 be amended in subsection 1 so that three physicians be added to the board of rehabilitation for medical advisory purposes.

The Committee recommends that the Committee on Scientific and Postgraduate Work be advised of their willingness to arrange for a plant inspection of a large industrial plant, the purpose being to foster interest of the medical profession in industrial medicine. It is suggested that such an arrangement be made in conjunction with the Annual Session of the Association in 1954.

H. M. ROEBBER, Chairman,
VENCEL W. HOLLO,
F. L. FEIERABEND,
V. T. WILLIAMS,
E. M. FESSENDEN.

The report of the Committee on Diabetes, William H. Olmsted, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON DIABETES

In conjunction with the Academy of General Practice, the following physicians gave lectures on the subject of diabetes during the last year: Dr. I. C. Layton, Kansas City, at Nevada and Warrensburg; Dr. R. P. Ladenson, Columbia, at Rolla; Dr. J. A. Atkins, Columbia, at Louisiana; Dr. E. L. Loyd, Jefferson City, at Chillicothe; Dr. H. K. Roberts, St. Louis, at Kennett and Columbia, and Dr. W. H. Olmsted, St. Louis, at Cape Girardeau and Springfield.

These lectures have been well received and greatly appreciated. There has been too little on the subject of diabetes published in The Journal in the last year and this Committee feels responsible for that deficit.

Exhibits have been presented at the last few meetings of the State Association. They have been sponsored by the Kansas City Diabetes Association and the St. Louis Diabetes Association. The Committee feels that these exhibits have been good but have attracted little attention from the profession.

Diabetes Detection and Education: Diabetes detection has now been in operation for several years. When it was inaugurated the public entered into the detection program with enthusiasm, but after a few years the experience in St. Louis has demonstrated that the public becomes extremely indifferent. Diabetes detection is difficult but worth while and to be successful the approach to the public must be varied from year to year. As yet insufficient money has been available to enter into diabetes detection thoroughly and with a trained professional staff. If money were available it would be easy to conceive a procedure for uncovering diabetes cases in large numbers. The Tuberculosis Society has explored this field thoroughly and has shown what methods are the most productive.

The use of the St. Louis Dreypak has made urine examination for sugar a simple matter. The main drawback to this device is that as yet it cannot be mailed after using. The American Diabetes Association has begun experiments which they believe will demonstrate to the Post Office authorities that there is no harm in sending the device through the mail. At present this committee feels that diabetes detection is an extremely important division of public health work.

Need for Professional Leadership of Lay Organizations: Diabetes is a disease which does not incapacitate nor cripple and, with modern treatment, the life expectancy of the diabetic person is almost as long as that of the nondiabetic. But, the diabetic person soon learns that to be successful in attaining good health he must learn certain things, namely: to manage his diet, to take injections of insulin himself and, finally, to examine his urine daily. There is a strong tendency for diabetic persons to get together and discuss their welfare and to form societies. This being the case, the Committee feels that such groups of persons with diabetes should have good medical leadership. Above all this Committee wishes to emphasize the need of programs for lay groups. If the lay diabetes groups are to be successfully led by physicians, the latter must have a well thought out program to sponsor and urge the lay group to follow. The agency best suited to furnish programs for lay groups is the American Diabetes Association. Just as soon as this association furnishes the individual doctor with a program, not only for diabetes detection but for other fields as well, the Committee can ask the county societies to appoint physicians whose responsibility will be to furnish professional leadership. It is the Committee's opinion that in the case of the diabetic person, one has an opportunity to develop good public relations to an extraordinary degree between the physician and the public.

The American Diabetes Association is wholly a professional organization. It intends to remain that way and at the same time it realizes its great responsibility toward the diabetic person and the need for formation of both rural and urban diabetes societies, groups and organizations throughout the country. It is the announced policy of the American Diabetes Association that these lay organizations must be sponsored and directed by physicians. The Committee feels that the public is only too glad to follow professional leadership.

State Fair: The Committee is in favor of abandoning exhibits presented at the State Medical Association Annual Sessions in favor of assisting in sponsored exhibits on obesity and diabetes at the State Fair in Sedalia. Next year the state Association exhibit will be on the subject of obesity and the Committee hopes to supply throw-away flyers emphasizing obesity as one of the causes of diabetes.

Wm. H. Olmsted, Chairman,
Blaine Z. Hibbard,
Llewellyn Sale,
Edgar D. Baskett,
Lucien W. Ide,
Vincent J. LoPiccolo,
Armand W. Hanss.

The report of the Committee on Anesthesiology, Carl K. Ness, M.D., St. Joseph, Chairman, follows:

REPORT OF THE COMMITTEE ON ANESTHESIOLOGY

This Committee has had no group meeting this year but communication by mail has been carried out throughout the year. Activity of the Committee has continued in close association with the efforts of the Committees of the Missouri State Society of Anesthesiologists.

This past year the postgraduate education program was initiated by a course given in Springfield, October 5, 1952. These programs are intended for the general practitioner throughout the state who does part time anesthesia. The postgraduate program is planned to be presented in numerous locales of the state from time to time with varied subjects. There is no fee involved and ample notice precedes the program, giving time, location and subject to be presented.

Efforts continue to place full time anesthesiologists in areas that request or need them. This past year, two well trained men have located in Cape Girardeau, and one in Grandview.

Encouragement to invite anesthesiologists to present scientific programs at local county medical society meetings has been continued. Numerous county societies have availed themselves of this invitation during the last year.

The plans for this coming year call for more effort directed at extending the above program.

Carl K. Ness, Chairman,
Joseph A. McNearney,
H. J. Freiheit,
Merritt H. Kimball,
O. B. Crawford.

The report of the Committee on Physical Medicine, C. Stewart Gillmor, M.D., Kansas City, Chairman, follows:

REPORT OF THE COMMITTEE ON PHYSICAL MEDICINE

After consultation by telephone and correspondence, this Committee submits the following suggestions:

That the desirability of employing only registered physical therapists (American Registry of Physical Therapy) and buying and using physical therapy equipment only when it has been accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association, be called to the atten-

tion of the members of the medical profession in Missouri and particularly of hospital administrators.

That regional exhibits and demonstrations of physical therapy be offered so doctors may become more familiar with its advantages and be stimulated to employ this type of treatment.

That physical medicine is important and has stood the test of time. When used in conjunction with other therapeutic measures, and properly administered, it is beneficial.

C. Stewart Gillmor, Chairman,
Sedgwick Mead,
L. A. Knese,
R. A. Ritter,
Emmett Settle.

The report of the Committee on Tuberculosis, Paul Murphy, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON TUBERCULOSIS

The Committee on Tuberculosis met in Jefferson City on January 7 to study the request of the Council that the Committee recommend procedures in regard to hospital facilities for the care of tuberculosis. Dr. James R. Amos, Director of the Division of Health, had asked the assistance of the Council.

The Committee's study disclosed that the current trend of tuberculosis mortality in Missouri is downward. New cases reported continue at approximately the level of recent years. There is room to believe that there are a number of undiagnosed cases among segments of the population not yet checked by x-ray screening. (It has been reported, for example, there may be between 400 and 500 such undiagnosed cases in the City of St. Louis.) There is little or no waiting period at the *present time* for admission to the Mount Vernon Sanatorium, nor is there any problem of waiting for admission to Koch, Leeds or Webb City. So long as Homer Phillips and City Hospital provide beds for tuberculosis patients in the St. Louis area, the waiting period at Koch Hospital probably will not be serious. Additional beds will soon be available at Mount Vernon.

In view of these facts, the Committee unanimously recommended to the Council:

1. That no new hospital facilities be constructed by the state at the present time.
2. That the Confedcrate Home in Higginsville not be rehabilitated and converted into a tuberculosis hospital.
3. That, should any new building be contemplated, an addition to Mount Vernon, Koch or Leeds would be the most effective course. (The Higginsville location for a new hospital would be unsatisfactory because of the necessity of duplicating basic facilities already available and assembling new hospital and medical staffs from scratch.)
4. That a further increase be made in state payments to Koch, Leeds and Webb City Sanitoriums to cover the full cost of patient care. In particular, it is urged that the state at least meet the full cost of care for patients admitted to these hospitals from areas other than St. Louis, Kansas City and Jasper County. (The fine action of the Legislature in 1951 in making available additional funds toward payment of patient care at Koch, Leeds and Webb City merits recognition, but even the current payment of $17.50 per week per patient is less than one-half the actual cost of such care.)
5. That, when and if it develops that existing public tuberculosis hospital facilities are fully in use, or for other reasons it is more feasible, arrangements be made for the care of patients in private hospitals on the basis of state payment of the full cost of the care.

These recommendations provide for a realistic maintenance of the state tuberculosis program on a basis of practical economy under presently existing circumstances.

Paul Murphy, Chairman,
I. J. Flance,
E. E. Glenn,
Lawrence E. Wood,
J. L. Mudd,
C. A. Brashear,
W. P. McDonald,
F. E. MacInnis,
H. L. Greene.

The report of the Committee on Study of Cardiac Disease, E. Lee Shrader, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON STUDY OF CARDIAC DISEASE

The Committee met three times during the last year. At the first meeting held on July 20 in St. Louis, radio programs entitled "Know Your Heart" were presented. These programs were developed by St. Louis University School of Medicine, through funds provided by the U. S. Public Health Service, handled in Missouri by the State Division of Health. The programs have been offered as a public service to radio stations in Missouri. The response has been excellent.

In each recording it is brought out that the sponsoring groups, in addition to St. Louis University, the State Division of Health, and U. S. Public Health Service, are local heart associations, such as, Missouri Heart Association, St. Louis Heart Association, and the Missouri State Medical Association. It is explained that these organizations are collaborating in the cardiac disease control program of the state. The Committee approved of the recordings and urged that they receive as wide a coverage as possible in Missouri.

Projects of the local heart association groups were brought to the attention of the Committee. Good programs and projects are in effect in some communities. However, many other communities are eager to begin projects if suitable ones can be found. The Committee desires to secure more information about local and statewide projects in order to evaluate them and to better fit them into an overall state set-up. It was agreed that a letter be sent to all Heart Associations requesting information about present projects and future plans and that a copy of the resolution adopted by the Committee be included with the letter. The resolution follows: Whereas, Various voluntary organizations have been created in the State of Missouri to develop heart disease control programs and, Whereas, These organizations have various and diverse projects in effect in order to attain such ends, and Whereas, The Committee on Cardiac Disease of the Missouri State Medical Association has been charged with the duty of studying and evaluating these projects and programs in order to coordinate the activities of all voluntary and official agencies interested in the furtherance of heart disease control, now therefore be it, Resolved, That the Committee contact all voluntary agencies in this field, and request information about present and future plans of heart disease control, and invite the cooperation of these voluntary agencies in cooperating with the Committee to clear and integrate future proposed programs with all other agencies, both voluntary and official, in the state.

Discussion took place relative to the status of the Committee concerning the Missouri State Division of Health. It was pointed out that other committees of the Missouri State Medical Association serve as advisory committees to the Division of Health, in such fields as, Mental Health, Maternal and Child Welfare, Venereal Disease and Tuberculosis. It was recommended, therefore, that a letter be sent to the new Director of Health, James R. Amos, M.D., offering the services of the committee in an advisory capacity. The

following resolution was adopted to be enclosed with the letter: Whereas, The Committee on Control of Cardiac Disease of the Missouri State Medical Association offer its services to the State Division of Health to assist in every possible way to further the program in cardiac disease control and to coordinate the Division of Health's program with the programs of voluntary agencies into an overall integrated state-wide program for heart disease control.

The second meeting of the Committee was held on November 16. At this meeting the Chairman reported a meeting with Dr. James R. Amos, Director, State Division of Health. The director had been sent a copy of the resolution adopted at the July 20 meeting. He stated that he would welcome the advice of the Committee in matters relating to heart disease.

In line with action taken at the previous meeting, letters were sent to the Missouri Heart Association and the St. Louis Heart Association requesting information about present and future programs. Replies from these organizations were read by the Chairman.

Mr. O'Brien, Executive Secretary, Missouri State Medical Association, advised the Committee of the desire of the Association to expand the programs of the Woman's Auxiliary. Several of the auxiliaries have been arranging successful meetings of the women's organizations. At these meetings, speakers have been secured by the Association who deliver health talks to the group. He explained that programs had been worked out by other Committees of the Association for these auxiliary meetings and that no doubt arrangements could be worked out with the auxiliary to assist the Missouri Heart Association in developing such meetings.

Following discussion, it was agreed that the Chairman should write to the Missouri Heart Association offering the services of the Committee in the development of lay educational programs; explain that professional programs of an educational nature, through the cooperation of the State Division of Health, have been arranged by the Missouri State Medical Association in the various councilor districts of the Association and also that the Missouri Academy of General Practice has arranged educational programs for their members through the fall of 1952 and spring of 1953. As a result educational programs for the profession handled through the Missouri Heart Association would be a duplication of effort.

At a meeting on February 1, 1953, the Chairman reported receipt of a letter from Mr. Eldredge White of the Missouri Heart Association regarding radio programs available from the American Heart Association and the American Medical Association. Following discussion, it was moved and seconded that the Chairman contact Mr. White and advise him that the Missouri State Medical Association will request a full set of the radio programs to be sent to them. Drs. McIntire, Loyd, Shrader, Amos and Meinershagen will then arrange to review the platters and if they agree they are worthwhile, will arrange for them to be presented in Missouri by the Missouri State Medical Association and the Missouri Heart Association.

The Committee discussed a request of the Council on Social Agencies of Kansas City that the Committee evaluate the Rheumatic Heart Convalescent Center in Kansas City to determine whether or not it is a necessary agency to be financed by the Kansas City Community Chest. The Committee did not take action on this, pending information from the Jackson County Medical Society to see if that organization approved the Committee undertaking this project.

E. Lee Shrader, Chairman,
H. W. Carle,
V. Bryce Ballard,
Drew Luten,
A. M. Estes,
E. J. McIntire,
Earl L. Loyd.

The report of the Committee on Alcoholism, Ralph E. Duncan, M.D., Kansas City, follows:

REPORT OF THE COMMITTEE ON ALCOHOLISM

This Committee was originally activated by a resolution introduced and approved by the House of Delegates at its 1951 Session and functions as an advisory committee.

The activities of the members of the Committee since the 1952 session have been as follows:

Member S. D. Smith, Columbia, has continued to be the principal worker in the Missouri Committee for Education on Alcoholism which is affiliated with the National Committee on Alcoholism of New York. In the "News Letter" for the Missouri Committee for Education on Alcoholism, Dr. Smith, as the Acting Director, states the following "Objectives Reached":

1. Secured affiliation with the National Committee.
2. Created an awareness in the Missouri State Medical Association.
3. Secured literature for distribution.
4. Held lectures and radio talks.

and adds "Objectives To Be Achieved" as follows:

1. Offer help for all alcoholics who honestly want to rid themselves of the disease, alcoholism.
2. Create an awareness in the various health departments, from the municipal level on up, that "Alcoholism is an Illness," and should be treated as any other disease.
3. That alcoholism must be recognized as a "Health Problem," with the resultant educational promotion necessary to bring about public support and financial backing.
4. Invite educators and welfare workers, or those engaged as supervisors or administrators in public or private institutions, to cooperate with the Committee in handling the problem of alcoholism.
5. Set up a lecture bureau to serve the public and better inform them of the Committee's work.
6. Take advantage of the Yale Summer Institute's Training School on Alcoholism each year.

Dr. Smith believes that more members of the M.S.M.A. should become members of the Missouri Committee for Alcoholism so that they, as members, might contribute some of their individual effort on a direct approach to the problem in their community's citizens groups and also with a substantial membership (voters) approach the newly installed Governor with the problem and gain his support with the legislators to provide state means and ways to aid and abate the eradication of the alcoholic problem which is the fourth medical problem in the state.

In another letter to the chairman of this Committee, Dr. Smith reports "The State School Committee on Health and Sociology has taken under consideration certain studies for their new curriculum. We have spent considerable time in Jefferson City and St. Louis bringing this to their attention. Mississippi and Utah have given us the best instruction. We have made the same effort to get some factual information into the curriculum in the University of Missouri."

At a meeting of the "President's Commission on the Health Needs of the Nation" held in St. Louis, September 15, 1952, under the Chairmanship of Dr. E. A. Graham, Dr. Smith delivered to Dr. Graham a report on the problem of alcoholism in Missouri. Dr. Graham assured Dr. Smith he would include the report on alcoholism with the others that were being received by the "Commission."

Member Joseph B. Kendis, St. Louis, instigated a panel discussion on "Alcoholism, A Medical and Social Problem" for the first St. Louis Medical Forum Meeting of the 1952-53 Season in the St. Louis Medical Society Auditorium on October 9. Speakers on the program included Mr. George C. Dyer of Alcoholics Anonymous, subject: "The Alcoholic and A.A.";

Rev. Raymond McAllister of the Webster Groves Christian Church, subject: "The Spiritual Aspects of Alcoholism"; Dr. Joseph Kendis, subject: "Medical Aspects of Alcoholism"; Dr. Ernest Parsons, subject: "Psychiatric Aspects of Alcoholism"; Richard Sutter, subject: "The Drinking Driver," and "Alcoholism in Industry." M. Norman Orgel acted as moderator. The presentation was jointly sponsored by the St. Louis Medical Society and the St. Louis County Medical Society. An audience question period followed the formal talks.

Dr. J. William Thompson, chairman of the Medical Forum Committee, described the attendance as the largest since the free public meetings for laymen were initiated in November of 1950, approximately 500.

The Committee on Alcoholism of the Jackson County Medical Society whose members are as follows: Ralph Emerson Duncan, Chairman; Hubert M. Parker and G. Wilse Robinson, Jr., made a study during the last year on the operation of an alcoholic clinic for the Salvation Army's Men's Social Service Center in Kansas City. The Salvation Army had requested the president of the Jackson County Medical Society for this help and following the committee's report the Salvation Army officials in Kansas City, with the approval of their national headquarters, set up the alcoholic clinic as suggested by the Jackson County Medical Society Committee. A brochure on this clinic is included with this report (not for publication but as a reference item).

At the 30th Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society, the Jackson County Medical Society's Committee on Alcoholism had an exhibit in their Scientific Exhibits. The exhibit was 30 feet long and 8 feet high, in color, and set forth factual information in reference to the subject as well as showing the alcoholic pattern "The Pathology of Alcohol" as set forth by Dr. E. M. Jellinek of the Yale Plan at New Haven, Connecticut. This exhibit will be shown at this Annual Session of the Association and the Committee will also have available free literature for all members who ask for it. A member of the Committee will be in attendance at all times during the session to aid any member or officer of any component society with information on the subject in general as well as to furnish him with data on organizing a Committee on Alcoholism in his component society. A photograph of the Jackson County Medical Society's exhibit is appended to this report as reference material but not to be made a part thereof.

The Committee was quite happy about being invited by the Committee on Health and Public Instruction of the Association to participate in the exhibit at the Missouri State Fair, August 16 to 24, 1952, at Sedalia. The exhibit was one prepared by the American Medical Association, "Testing the Drinking Driver." It was well prepared. The chairman of our Committee and member S. D. Smith assisted the Association's Field Secretary, Mr. Raymond McIntyre.

The Missouri State Highway Patrol added a display on "Alcohol Blood Tests" and the Kansas City Police Department furnished a "Drunkometer." These later two additions attracted considerable attention. The chairman of the Committee was impressed with the "crowds" that stopped at the exhibit—estimated some 25,000—and it might be added that many of those that stopped to look submitted their "breath" for testing with the "Drunkometer" and the results and emotions shown were varied and interesting. The Committee asks your permission to include in this report the following statement: It is the Committee's belief that the Association through its Committee on Health and Public Instruction should expand its exhibit on health and allied subjects for more public meetings, especially at county fairs and large nonprofessional group meetings. Public instruction will, in our belief, do more to keep the citizens (voters) of our country interested in private enterprise.

At the Fourth Annual Scientific Assembly of the American Academy of General Practice held at Atlantic City, March 24 to 27, 1952, a whole morning's program was conducted on "The Problem Drinker, His Medical Management and Rehabilitation," and integrated with three scientific exhibits, namely: (1) What the General Practitioner is doing for the Alcoholic, presented by the Western New York Committee for Education on Alcoholism, Buffalo, N. Y.; (2) Community Resources in the Treatment of Alcoholic Patients, presented by the National Committee on Alcoholism, New York, N. Y., and (3) Research and Education on Alcoholism, presented by Yale Center of Alcohol Studies, New Haven, Conn.

The 1953 Session which will be held in St. Louis March 23 to 26 will include in the scientific exhibits the American Medical Association's Exhibit on "Testing the Drinking Driver" similar to the exhibit the Association displayed at the Missouri State Fair except with an addition of three types of testing apparatus to determine the drinking driver's degree of intoxication. Members of the Missouri State Medical Association Committee on Alcoholism have accepted an invitation from the American Medical Association's Bureau of Legal Medicine and Legislation to assume full charge of this exhibit during the session.

All members of the Committee met at the Kansas City Club in Kansas City, February 15, 1953, and agreed unanimously to:

1. Send letters to all members of the M.S.M.A. not living in communities that have component society committees on alcoholism; namely, Boone County, Greene County, Jackson County, St. Louis City and St. Louis County to ascertain the individual members' attitude to the problem of alcoholism.

2. To organize a group of members who will be available to speak at component society meetings on medical and other aspects of the problem, alcoholism.

3. Study legislative needs to handle the reluctant excessive user of alcoholic beverages to adopt a rehabilitation program. A copy of a bill, H.R. 8471, introduced in the House of Representatives on July 2, 1952, is included with this report (not for publication but as a reference item. This is a bill to promote the general welfare by organizing a Bureau of Clinics for the treatment of chronic alcoholics and narcotics addicts).

Members Forman and Coffelt suggested that the Committee make the following recommendations to the Council of the M.S.M.A.

1. The Council recommend to the House of Delegates at its coming meeting in Kansas City that:

(a) The Committee on Alcoholism be continued.

(b) The aim of the Committee as outlined in their 1952 report and printed on page 28 of the "Report of Officers and Committees" for 1952 be reaffirmed by the Association.

RALPH EMERSON DUNCAN, Chairman,
KENNETH C. COFFELT,
GEORGE W. FORMAN,
JOSEPH B. KENDIS,
S. D. SMITH.

The report of the Committee on Rural Medical Service, A. E. Spelman, M.D., Smithville, Chairman, follows:

REPORT OF THE COMMITTEE ON RURAL MEDICAL SERVICE

During the calendar year 1952 there were some sixty-one physicians who began private practice in this state exclusive of Jackson County, St. Louis County and St. Louis City. The physician's placement service in the Association headquarter's office gave substantial assistance to a good number of these doctors in their efforts to find a suitable location. Reasonably complete and up-to-date information concerning com-

munities and towns, throughout Missouri, seeking resident physicians, is maintained by the placement service. It is urged that all members point out this free service to those they may know who are looking for locations. It is hoped that physicians returning from military service may find this location service helpful.

The Committee is concerned about the problem of further reducing the number of doctors in rural areas through calls to military service. The Medical Advisory Committee to Missouri Selective Service is congratulated for its attitude and splendid efforts to protect the medical care of civilians in rural areas. It is recommended that such efforts be continued.

By the time this report is received two new fifty-bed federal aided county hospitals will be in operation, one at Milan in Sullivan County, the other at Troy in Lincoln County. During 1952 the new 265 bed St. John's Hospital in Springfield began receiving patients and a substantial addition was completed at Burge Hospital at Springfield. Both of these institutions received federal grants. Construction was started August 13, 1952, on the new $840,000 federal aided addition to St. Vincent's Hospital in Monett.

A new $75,000 community hospital at Windsor began receiving patients on October 1. This hospital of twenty-six bed capacity is an excellent example of what local initiative can do. No federal, state or other tax funds were used in the building of this efficiently planned and economically well constructed hospital. This project was financed through contributions of the people of the community and is, of course, set up as a nonprofit institution. It was the privilege of the Chairman of the Committee to make two trips to Windsor before the hospital was built and to contribute in some measure to its design.

Local funds of $250,000 were raised during the summer in Marshall and surrounding communities to match federal funds allotted for a sizable addition to the Fitzgibbon Hospital in Marshall.

Plans are being considered by the Board of Trustees of the Lexington Memorial Hospital for expanding the facilities as much as twenty additional beds. Steps have been taken to obtain federal funds for aid in the project.

Construction is progressing on a twenty-two bed addition, with the aid of federal funds, to the Pike County Hospital at Louisiana.

Voters in Chillicothe approved a $190,000 bond issue on May 28, 1952, for a twenty bed addition to the present thirty bed municipal hospital.

A $500,000 hospital bond issue for constructing an addition to the Boone County Hospital in Columbia was voted down by a narrow margin on November 4.

Efforts are being made by a substantial number of citizens of both Clay and Harrison counties to raise local funds sufficient to match anticipated federal funds for the construction of new hospitals in those counties. So far these projects have not been proposed as tax supported county hospitals.

The Committee feels that good progress has been, and is being, made in adding hospital facilities to the rural areas of this state.

The Council of the State Association, late in 1951, charged this Committee with the task of studying a number of county health units, departments or centers (whichever they might be termed in a particular locality) as to their present make-up, objectives and functions. Following this study a recommendation by the Committee to the Council was requested which was to advise an official position for the State Association to take in approving, endorsing or disapproving these public health organizations. Visits were made to a good number of the county health units over the state by individual members of the Committee and great effort was made to evaluate the units objectively. This Committee held a night meeting in Kansas City on October 6, 1952, and at that time carefully considered the reports of members on the units they had studied. After due consideration the Committee formed its recommendation and presented it to the Council at its meeting in St. Louis on November 29, 30, 1952. This recommendation appears under the report of the Council for that date and is published herein.

The Committee urges all members to aid in any way they can the promotion of Blue Cross and Blue Shield and particularly to bring to people who have been unable to join through groups the information on present opportunities for individual enrollment which the four plans in the state are now making available.

It appears that too little interest on the part of too many doctors over the state, toward local health councils, is still prevalent. It is well to remember that the main objective of a health council is to mobilize all of the health resources of a community in a manner which will meet best the health needs of that community. Surely all can approve that objective. It seems, therefore, reasonable to urge again that physicians throughout the state take an active interest in the development and functions of any such local councils.

The indigent medical, hospital and dental care survey and study to be made in Missouri, under the auspices of the Missouri Health Council, is expected to get under way sometime during 1953. The Committee respectively requests that all members of the Association give full cooperation and reasonable information when called upon by the survey personnel.

A. E. Spelman, Chairman,
R. W. Kennedy,
W. A. Broyles,
W. J. Shaw,
Martin M. Hart,
A. S. Bristow,
Eugene Canty,
Ray Johnson, Jr.,
C. C. Castles.

The report of the Council, Victor B. Buhler, M.D., Kansas City, Chairman, follows:

REPORT OF THE COUNCIL

The Council met on April 2, 1952, following the last session of the House of Delegates of the 94th Annual Session. J. W. Thompson, M.D., President, presided.

Victor B. Buhler, M.D., Kansas City, was reelected Chairman of the Council and took the chair.

W. S. Sewell, M.D., Springfield was reelected Vice Chairman of the Council.

H. E. Petersen, M.D., St. Joseph, was reelected Secretary of the Association.

C. E. Hyndman, M.D., St. Louis, was reelected Treasurer of the Association.

The new members of the Council were introduced: R. O. Muether, M.D., St. Louis, Councilor of the Third District; J. Loren Washburn, Versailles, Councilor of the Fifth District; J. H. Summers, Lebanon, Councilor of the Ninth District.

The time and place of the next meeting of the Council was left to the Chairman and the Executive Secretary to decide.

MEETING OF JUNE 21, 22

The Council met at the Sheraton Hotel, St. Louis, June 21, 22, 1952, with Victor B. Buhler, M.D., Kansas City, Chairman, presiding.

Those present were Drs. Buhler, Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; R. O. Muether, St. Louis; John O'Connell, Overland; J. Loren Washburn, Versailles; R. W. Kennedy, Marshall; W. S. Sewell, Springfield; J. H. Summers, Lebanon; Frank W. Hall, Cape Girardeau; J. W. Thompson, St. Louis; E. C. Bohrer, West Plains; C. E. Hyndman, St. Louis; R. E. Schlueter, St. Louis; James R. McVay, Kansas City; Howard B. Goodrich, Hannibal; Henry Allen,

St. Louis; E. A. Belden, Jefferson City; C. Souter Smith, Springfield; Robert D. Mattis, St. Louis; Victor E. Scherman, St. Louis; D. B. Landau, Hannibal; Curtis H. Lohr, St. Louis; James R. Amos, Jefferson City; Messrs. John Noble and Lawrence Bradley, Kennett; Lemoine Skinner and John G. Miller, St. Louis; W. H. Bartleson, Kansas City; Ray McIntyre and T. R. O'Brien, St. Louis.

World Medical Association

Mr. O'Brien read a communication from the World Medical Association asking that a member appear on an Annual Session program, that the Association become a supporting member, that it be endorsed and that information appear in the JOURNAL. After discussion, upon motion of Dr. Kennedy, it was voted to endorse the World Medical Association and to find out what a supporting membership would cost with the view of becoming one.

Brucellosis Conference

A letter from the Minnesota Department of Health asked that a representative be sent to a Conference on Brucellosis involving fourteen states at St. Paul on July 7, 8, 9. After discussion, upon motion of Dr. Francka, it was voted to thank them for the invitation and offer cooperation but not to send a representative.

Deductions From Income Tax

The following letter from the Department of Internal Revenue, Washington, D. C., on deductions from Income Tax was read:

"Reference is made to your letter dated March 10, 1952 in which you request rulings with respect to the deductibility by doctors, for Federal income tax purposes, of the following items: (1) expenses for entertaining other physicians by whom patients are referred; (2) contributions made to funds raised for the social activities of student hospital nurses; (3) contributions made to hospital interne funds; (4) expenses of Christmas or other anniversary presents sent to patients or to other physicians; and (5) cost of floral offerings and kindred items sent to patients or to other physicians.

"Section 23 (a) (1) of the Internal Revenue Code provides that in computing net income there shall be allowed as deductions all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business.

"Section 24 (a) (1) of the Code provides that in computing net income no deductions shall in any case be allowed in respect of personal, family, or living expenses, except extraordinary medical expenses deductible under section 23 (x).

"Ordinarly, gifts to individuals constitute personal expenses, the deduction of which is prohibited by section 24 (a) (1) of the Code. Whether or not amounts expended by a doctor for gifts and floral offerings to his patients, other doctors and/or members of their families and for entertaining any such persons constitute ordinary and necessary business expenses for Federal income tax purposes must necessarily depend upon the facts in each particular case. Since a large personal element is generally present in such matters, substantial evidence is a prerequisite to the allowance of such amounts as deductible business expenses.

"If it can be shown that a business benefit commensurate with the amount of the payments results from such gifts and entertainment, the amount thereof might constitute an allowable deduction as a business expense.

"Whether or not contributions made to funds raised for the social activities of student hospital nurses and to hospital interne funds, are deductible as a business expense under section 23 (a) of the Code depends upon whether, in the practice of his medical profession, a doctor is expected by custom to make such payments and whether the amounts thereof are commensurate with the services rendered for which they represent compensation."

Accident and Sickness Insurance

It was pointed out that a clause is contained in the Association agreement relative to the accident and sickness insurance policy of the Metropolitan Life Insurance Company which allows a new member of a county society to obtain such insurance without medical examination provided he applies within a period of forty days after being accepted as a member.

"Cheers for Chubby"

A letter from the Metropolitan Life Insurance Company was read thanking the Association for its help in promoting the film on diet, "Cheers for Chubby," and reporting that it had been shown in 40 per cent of theaters in Missouri.

Treasurer's Report

Dr. Hyndman reported on the finances of the Association and gave figures showing that a small profit had been made on the Annual Session.

Field Secretary's Report

Mr. McIntyre reported that physicians, during the last two months, and by July 1, will have located in Nevada, Winfield, Princeton, Appleton City, Ava, Miller, Rockport, Perryville, Bourbon, Lebanon, Hermitage, West Plains, Steelville, Salem and Joplin. He reported that the following hospitals were under construction, additions being made, or plans for them completed: Audrain County Hospital, Mexico; Fitzgibbon Hospital, Marshall; a hospital at Windsor; Lincoln County Hospital, Troy; Chillicothe and Milan. He reported that Councilor Districts 10, 9, 4, 2 and 5 have had meetings this spring and 6 will have one soon; that twenty-one scientific speakers had been furnished since the Annual Session. He said that space had been reserved for the Missouri State Fair in August for an exhibit and that the AMA exhibit "Testing the Drunken Driver" will be used.

Audrain County Hospital Suit

Mr. Bradley reported that a hearing was held on June 4 before the Appellate Court in St. Louis and that a decision might be expected within two or three months.

Reed-Keough Bill

After discussion the following resolution was presented and adopted:

Whereas, The Congress has encouraged the development of private retirement plans, both prior and subsequent to the enactment of the Social Security Act, and

Whereas, Sections 165 and 23 (p) of the Internal Revenue Code provide preferential tax treatment for employees in that employer contributions to the cost of employee pension plans are deductible items when made and employee participants only pay tax on the benefits purchased through employer contributions when they begin receiving payments at retirement, and

Whereas, Such legislation does not apply to self employed persons such as farmers, lawyers, dentists, physicians or other professional men and women, and

Whereas, Even though these groups are not under Social Security at their own request, they still are in the "forgotten man" category so far as supplemental pensions are concerned because they do not have the

right of tax deferment on a portion of their income set aside for retirement purposes as is given employed persons under Section 165 of the Internal Revenue Code, and

Whereas, HR 4371 and HR 4373, presently being considered by the House Committee on Ways and Means, provide reasonable methods whereby the self employed and professional groups may have an opportunity to secure supplemental retirement benefits on the same basis as employed groups, now, therefore be it

Resolved, That the Missouri State Medical Association favors the enactment of HR 4371 and HR 4373 with appropriate amendments as suggested by the American Medical Association at the Committee hearings and that a copy of this resolution be sent to all members of the House of Representatives and Senate of the United States from the State of Missouri.

Dr. McVay

Dr. Buhler announced that Dr. James R. McVay, Kansas City, had been elected to the Board of Trustees of the American Medical Association and Dr. McVay spoke to the Council and reported on the recent American Medical Association session. This was discussed by several present who had attended the session.

Trachoma in Missouri

Dr. C. Souter Smith, Chairman of the Committee on Conservation of Eyesight, reviewed the problem that had been referred to the Committee by the Council on the many diagnoses of trachoma being made through the Trachoma Hospital at Rolla and asked that Dr. Belden present two reports that had been made to the Division of Health. Dr. Belden presented reports of surveys by Drs. Alson E. Braley, Iowa City, and Phillips Thygeson, San Jose, California. The reports, while showing a few cases of trachoma, did not substantiate it being a problem in Missouri. After discussion in which it was brought out that the Division of Health was handling the problem adequately, on motion of Dr. Sewell, the Committee was commended for its work and Dr. Belden and the Division of Health for their efficient conduct of it and the Committee was asked to keep in touch with Dr. Belden on future developments in the question.

Woman's Auxiliary

Mrs. R. A. Sutter, University City, President of the State Auxiliary, reported to the Council on the work of the Woman's Auxiliary and offered their efforts in any work of the Association. Mrs. Sutter was commended on the work of the Auxiliary and in discussion the difficulty of publishing and distributing the Bulletin was brought out. On motion of Dr. O'Connell, it was voted to furnish addressograph plates for the mailing of the Bulletin. It was felt that the Woman's Auxiliary should have a headquarters office and Mr. O'Brien was asked to study such a possibility.

HR 7800

HR 7800, which included a section which would place the handling of total and permanent disability under the Social Security Administration was discussed and Mr. O'Brien said that word had just been received that the Senate Finance Committee had deleted the Section 3 which had been objectionable, and said that he would keep the Council informed.

1952 Annual Session

Mr. O'Brien presented a report from the National Exhibitors' Association which expressed the satisfaction of exhibitors at the 1952 Annual Session.

Amendment No. 2

The following letter from the Missouri State Teachers Association was read by Mr. O'Brien:

"This is merely to direct your attention to Amendment No. 2 that will be voted on at the general election on November 4, 1952. The Amendment is an enabling provision increasing the bonding capacity of school districts from 5 per cent to 10 per cent of the assessed valuation. The indebtedness must still be approved by a two-thirds vote, as at present. The Amendment would bring school districts in line with cities and counties in this respect. It was placed on the ballot by an almost unanimous vote of the General Assembly.

"Enclosed is material showing the need of school districts for increased bonding capacity and practices in other states relating to bonded indebtedness.

"A list of state-wide organizations endorsing Amendment No. 2 is being prepared. We would be glad to learn of any action taken by your organization in this respect.

"If additional copies of the enclosed material or other information would be helpful, kindly let us know."

After discussion, on motion of Dr. Muether, the Council voted to endorse Amendment No. 2.

Legislation

Mr. O'Brien spoke briefly of legislation that is likely to be presented during the next session of the legislature and said that he would keep members informed and asked their assistance in things that may develop.

Advisory Committee to S.S.S.

Dr. Henry Allen, St. Louis, newly appointed Missouri Chairman of the Advisory Committee to the Selective Service System, reviewed the work briefly and asked that Councilors cooperate with him. He asked that he be contacted at any time at 404 Missouri Theatre Bldg., 634 N. Grand Avenue, St. Louis; telephone, FRanklin 0265.

White House Conference

Dr. D. B. Landau, Hannibal, Chairman of the Committee on Infant Care, reported on the Advisory Child Welfare Council to the Missouri Association for Social Welfare which is planning to carry out recommendations of the 1950 White House Conference. He recommended that the Association not become a member as such but that it be recommended that county societies become members as units. On motion of Dr. Muether, it was voted to accept this recommendation. It was suggested that the Woman's Auxiliary join as groups.

The Journal

Dr. Thompson reported for the committee appointed to study The Journal administration and editing and, stating that it was a progress report, recommended that the Associate Editor, Dr. Vincent T. Williams, become editor at the beginning of the next volume of The Journal, January 1, 1953. He said that further recommendations would be made at a future meeting of the Council. On motion of Dr. Francka, this recommendation was accepted.

AMA Education Foundation

Mr. O'Brien reported that in 1951 only twelve physicians from Missouri had contributed to the AMA Education Foundation and that only one had done so in 1952. It was pointed out that many contributions went directly to schools but that now these can go through the Foundation for the specific schools. On motion of Dr. Muether, the President was asked to

appoint a committee to implement the drive for funds for the Foundation.

AMA Dues

Mr. O'Brien gave each Councilor a list of members by districts who were delinquent in AMA dues. After discussion on motion of Dr. Dowell, it was decided that a follow-up letter should be sent from the Association office and on September 1, Councilors and county societies be notified of delinquent members and their assistance be asked.

1951 Assessment

Lists of members who did not pay the 1951 Association Assessment were given to Councilors. After discussion, on motion of Dr. Muether, it was voted that the Association office implement a letter from the county society to each member pointing out that constitutionally, the member would have to be dropped from membership.

Indigent Care Survey

A letter from the Missouri Health Council Secretary stating that the amount necessary for the survey of the medically indigent of the state had been determined and the amounts that each organization should furnish allocated. The amount for the Association was $2,500.00. After discussion, on motion of Dr. Muether, the following committee was appointed to discuss the survey, present timeliness and the allocations with the Missouri Health Council and be empowered to take appropriate action: President, President-elect and the Treasurer.

Home Care of Veterans

Dr. Curtis H. Lohr, St. Louis, chairman of the special committee on care of the veteran, reported that the Veterans Administration wished to renew the contract which was enacted following World War II for the care of veterans in their own communities. On motion of Dr. Francka, it was voted to renew the contract.

Examination for Cancer

Material promoting the examination for cancer which had been received from the Connecticut Medical Association was presented and on motion of Dr. Francka, it was referred to the Committee on Cancer for study.

Employee Insurance

On motion of Dr. Bohrer, the following committee was appointed to study appropriate insurance or protection for employees of the Association who had been with the Association five years or longer: Drs. Bohrer, Buhler and Hyndman.

Patient Care

The following action of the Missouri Conference for Improvement of Patient Care was approved: "That the Conference circularize state and federal candidates stating that the group favors full credit for all bills for medical, nursing and hospital expenses and premiums for health insurance on the basis that such insurance is semi-catastrophic and should be considered for full tax deduction purposes."

Public Relations

Mr. Skinner reported briefly on public relations work with the Association. He reported that the idea of the handbook for office secretaries which the Association had considered had been taken over by the American Medical Association.

AMA Plaques

Attention was called to the plaques for physician's offices which the public relations department of the AMA had provided and Mr. McIntyre was asked to purchase twenty-five so that he could furnish them to physicians wishing them.

Reports of Councilors

Councilors reported for their districts.

Next Meeting

Dr. Hall invited the Council to meet in Cape Girardeau on October 4 and 5 and the invitation was accepted.

MEETING OF OCTOBER 4, 5

The Council met at the Marquette Hotel, Cape Girardeau, on October 4, 5, 1952, with Victor B. Buhler, M.D., Kansas City, Chairman, presiding.

Those present were Drs. Buhler; J. W. Thompson, St. Louis; E. C. Bohrer, West Plains; H. E. Petersen, St. Joseph; C. E. Hyndman, St. Louis; Victor E. Scherman, St. Louis; W. F. Francka, Hannibal; R. O. Muether, St. Louis; John O'Connell, Overland; J. Loren Washburn, Versailles; R. W. Kennedy, Marshall; W. S. Sewell, Springfield; J. H. Summers, Lebanon; Frank W. Hall, Cape Girardeau; Henry Allen, St. Louis; V. T. Williams, Kansas City; Messrs. W. H. Bartleson, Kansas City; Lemoine Skinner, St. Louis; Raymond McIntyre and T. R. O'Brien, St. Louis.

Invitation to S.M.A.

Mr. O'Brien read a letter from the Convention Bureau requesting that the Southern Medical Association be invited to meet in St. Louis in 1954. On motion it was voted that the Association extend an invitation for it to meet in St. Louis.

Conference of Presidents

On motion it was voted to contribute $75.00, the assessed amount, for the Conference of Presidents, the next meeting of which will be in New York on May 31, 1953.

Treasurer's Report

Dr. Hyndman presented the financial status of the Association, together with the amount that had been collected on the 1951 assessment during this year and stated that 190 members had not paid this assessment.

Advisory Committee to S.S.S.

Dr. Allen spoke briefly on the work of the Advisory Committee to the Selective Service System and this was discussed by practically all present, most of the Councilors having questions that applied to their own Districts. It was brought out that each case is judged individually and that often the Advisory Committee is not informed on what draft boards are doing.

Field Secretary's Report

Mr. McIntyre reported on various activities including survey of county health centers, exhibit at the State Fair, assisting the A.M.A. in studying physician placement work. He announced meetings of the various Councilor Districts for October and November and stated that there would be a series of meetings of the Academy of General Practice throughout the state which began in September and will continue through January. He said that the Committee on Rural Health would meet on October 6 and would formulate a report to the Council on county health centers.

1953 Annual Session

Mr. O'Brien reported briefly on the 1953 Annual Session, giving the dates as April 26 to 29, in Kansas City, and saying that the program was practically complete and that it would be an excellent program. He also said that invitations to exhibitors had just gone out and a good response was being had.

World Medical Association

Mr. O'Brien presented a letter from the World Medical Association and after discussion it was decided that any contribution should be considered by the Budget Committee at the next meeting of the Council and the following resolution was passed:

Whereas, The World Medical Association is an Association of the National Medical Association of 43 countries of the free world, and

Whereas, This association is the only international association which can speak for the practicing physicians of the world, and

Whereas, There are an increasing number of health problems being decided on an international basis, and

Whereas, There is an increasing need for an association to represent the practicing profession, and

Whereas, The American Medical Association is one of the Founder Members of the World Medical Association, and

Whereas, The American Medical Association is also one of the Founder Corporate Members of the United States Committee, Inc., of The World Medical Association and has urged physicians of the United States to become individual members of the United States Committee, Inc., therefore, be it

Resolved, By the Council of the Missouri State Medical Association that it endorses the work of the World Medical Association and of its supporting United States Committee, and be it further

Resolved, That the Council of the Missouri State Medical Association urges the Members of the Missouri State Medical Association to become individual members of the United States Committee, Inc., of The World Medical Association, and thereby aid in the elevation of standards in medical education and medical care throughout the world and ensure that the opinions of the practicing physicians of the world are adequately represented before various international bodies.

Editorship

Dr. Thompson gave the report of the committee to study the editorship as follows:

(a) The Editor shall be appointed for a term of one year, effective January 1, at which time a new volume of The Journal begins.

(b) The Editor may be reappointed by the Council.

(c) The Council shall appoint an associate editor whose term of office shall run concurrently with that of the Editor.

(d) The present Editorial Board be eliminated January 1, 1953.

(e) The Committee on Publication, now composed of five members, shall be continued with addition of five associate members. The Editor shall automatically be a member of the Committee. An elective member of the Council shall be appointed to serve as a member of the Committee. The Chairman shall be appointed by the Council.

(f) The Committee shall have complete charge of The Journal and any other publication of the Association; shall determine the scientific, editorial, news and advertising content of The Journal and shall render a report annually to the Council.

Upon motion, this was passed.

Journal Changes

Dr. Williams spoke on changes he would like to make in The Journal beginning January 1 and after discussion it was decided that the advertisement could be taken off the front cover and that Dr. Williams could make other suggested editorial changes. He stated that Dr. Muether would remain in charge of scientific material.

Blood Banks

Dr. Buhler presented the following from the proceedings of the A.M.A. House of Delegates:

"Your committee recommends that the material just read in A and B under "Principles" be transmitted to the American Hospital Association and each constituent state medical association for transmittal to their respective state hospital associations.

"A. Since blood is derived from human beings only, our aim should continue to be directed at having no profit from trafficking in whole blood itself. However, all services rendered cost something and are paid for by or on behalf of every recipient of such services. In the case of the Red Cross operation capital costs, depreciation of equipment, cost of supplies and numerous personal services, technical and otherwise, amount to about $5.00 per pint. It should be made clear that everyone for whom a unit of blood is delivered to a hospital receives not only the blood but also in effect a contribution of at least $5.00 furnished by the subscribers to the American Red Cross campaigns. It is doubtful whether in the long run it would be wise to continue this contribution to persons not otherwise entitled to public support.

"B. The committee has observed the wide variation in service charges in hospitals and blood banks. Local conditions will always cause some variations, but the extremes now observed seem inexplicable. The service charge should cover all costs of the operation including depreciation and expansion reserves, but the realization of profit for the support of other institutional needs should be discouraged."

After discussion it was decided that the resolution be transmitted to the hospital associations.

President's Commission on Health

Mr. O'Brien reviewed the meeting of the President's Commission on Health Needs of the Nation in St. Louis on September 15. He gave excerpts from the presentation by Dr. Thompson for the Association and reported on others, stating that several will appear in The Journal.

Missouri and Kansas Membership

Mr. Bartleson reported that a meeting had been held with officials of the Kansas State Medical Society and of the counties in Kansas which were involved. He said it was decided that the physician should belong to the state association in which he practiced with the exception of the chairman of a department or a member of the policy forming group on the faculty of the University of Kansas, who could belong to the society of his choice. In the case of a physician practicing in both states, if his choice is questioned an appeal to the Council of the State Association and also to the Judicial Council of the American Medical Association, if necessary, for determination. (A complete report will be filed in the Association office.) Upon motion, the report was accepted.

Practical Nurses

The plan of registered nurses to obtain legislation so that practical nurses may be licensed under the supervision of the registered nurse was discussed and after discussion, on motion, this was endorsed.

Survey on Medical Indigency

Dr. Thompson reported for the committee appointed to study and take action on the survey proposed by

the Missouri Health Council on indigent care and said that a meeting had been held and that further information on the assessment placed on the Association was being awaited.

Dr. James R. Amos

Dr. Amos was a guest at the Council meeting and spoke briefly asking for the cooperation of the Council and the Association in the work of the Division of Health. He said that he would welcome working with committees of the Association on various phases of work.

Blue Cross

Recent developments in the St. Louis Blue Cross concerning enlarging the number of hospitals participating in the plan were presented and, on motion, the former stand of the Blue Cross on standards of hospitals was endorsed. The position of the Association, adopted by the House of Delegates in 1950, relating to so-called comprehensive hospital plans was reviewed. It was agreed that medical services when included in a hospital contract should be handled by the Blue Shield medical service plans.

Medical Examiner

Dr. Buhler reported that pathologists in the state were working on legislation toward a medical examiner system in Missouri and the general principle was endorsed.

Budget Committee

Dr. Buhler appointed the following Budget Committee: Dr. Hyndman, chairman; Drs. Petersen, Bohrer, Thompson and Muether.

Dr. Hall Thanked

Dr. Buhler expressed the appreciation of the Council to Dr. and Mrs. Hall for their hospitality during the Council meeting.

MEETING OF NOVEMBER 29, 30

The Council met at the Sheraton Hotel, St. Louis, on November 29, 30, 1952, with Victor B. Buhler, M.D., Kansas City, Chairman, presiding. Those present were Drs. Buhler, J. W. Thompson, St. Louis; H. E. Petersen, St. Joseph; C. E. Hyndman, St. Louis; Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; R. O. Muether, St. Louis; John O'Connell, Overland; J. Loren Washburn, Versailles; R. W. Kennedy, Marshall; W. S. Sewell, Springfield; Frank W. Hall, Cape Girardeau; R. E. Schlueter, St. Louis; P. V. Siegel, Smithton; E. C. Ernst, St. Louis; Robert Mueller, St. Louis; Paul Johnstone, Kansas City; Henry Allen, St. Louis; James R. Amos, Jefferson City; A. E. Spelman, Smithville; A. S. Bristow, Princeton; Mr. Lawrence Bradley, Kennett; Mr. D. E. Caywood, Springfield; John R. Buckner, Springfield; Messrs. Lemoine Skinner, James Koenig, Raymond McIntyre and T. R. O'Brien, St. Louis.

Better Business Bureau

On motion of Dr. Kennedy, it was voted to contribute $100.00 to the Better Business Bureau, the usual dues paid by the Association.

Regional A.M.A. Conference

Dr. Thompson reported on a regional conference of the A.M.A. Washington Office held in Omaha on Nov. 9. He said that one of the reasons for the conference was for Dr. Frank Wilson, the new director, to become acquainted with individuals and their thinking throughout the country. Topics discussed at the conference included the Reed-Keogh bill, the waiver of premium bill, treaty laws as they can supersede state or federal laws and bypass Constitutional mandates or federal laws and bypass Constitutional mandates or state statutes; the draft law and the I.L.O.

Petition of Pettis County

Mr. O'Brien read a petition of the Pettis County Medical Society asking that that county be placed in the territory of the Kansas City Blue Cross and Blue Shield rather than the St. Louis area, in which they are now covered. This was discussed by most of the Council, it being brought out that the ideal situation would be for coverage to be the same in both plans or a combination of the plans, and that enrollment practices be liberalized, but also that the Council actually had no jurisdiction as to territory. On motion of Dr. Petersen, the Council recommended to Dr. Siegel that the Pettis County Medical Society take its petition direct to Blue Cross-Blue Shield.

Treasurer's Report

The Treasurer made a brief report and stated that fuller financial information would be made available through the Budget Committee which would report later.

Medical Record Librarians

Mr. O'Brien read a letter from the Medical Record Librarians asking approval of their work, especially in attempting to work in smaller hospitals in the state. After discussion in which this work was praised, on motion of Dr. Petersen, the Council voted to approve the work and encourage the group in their efforts.

Audrain Hospital Case

Mr. Bradley stated that it was possible that a decision on the Audrain County Hospital case would be handed down in the very near future. It was decided that copies of the decision should go to all councilors as soon as possible and that a digest of the decision should be sent to all members of the Association.

Field Secretary's Report

Mr. McIntyre reported on various meetings since the last Council session, together with a report on the variation on attendance at meetings. He displayed a map showing the unorganized counties in the state and pointed out the advisability of certain hyphenations as follows: Wayne, hyphenate with Butler; Bolinger, hyphenate with Cape Girardeau; McDonald and Newton, hyphenate with Ozarks; Ozark, hyphenate with South Central; hyphenate Cass, Bates, Henry, Vernon-Cedar and St. Clair; hyphenate Cooper, Morgan, Moniteau and Howard; hyphenate Miller and Osage with Cole; hyphenate Shelby with Marion-Ralls; hyphenate Andrew and Holt with Nodaway-Atchison-Gentry-Worth; hyphenate Clay, Clinton and Platte; hyphenate Audrain, Callaway and Montgomery; hyphenate Benton, Johnson, Pettis and Saline; hyphenate Lincoln and St. Charles. Move Ripley County from District 9 to 10 and hyphenate with Butler and Wayne; move Camden County from District 5 to 9 and hyphenate with Laclede; move Maries County from District 5 to 9 and hyphenate with Phelps-Crawford-Dent-Pulaski. On motion, Mr. McIntyre was instructed to follow up study on these hypenations, talking to the county societies and the Councilor Districts involved.

Cancer Committee Report

Dr. Ernst reported that the Committee on Cancer had been in close touch with cancer work in the state; that the Barnard Hospital has been taken over by Washington University; that the Missouri Division of the National Cancer Society had been reorganized and had formed a service committee which would work closely with the Committee on Cancer of the Associa-

tion and stated that this committee would be carefully appointed in order to carry out this work.

Advisory Committee to S.S.S.

Dr. Allen said that the Selective Service System was having a difficult time in obtaining physicians to replace those that have been in service for two years; that soon after the first of the year they probably would begin calling in priority 3 men. He said that the Army would prefer the younger men in priority 4 rather than the older men in priority 3, which is causing some difficulty. He said that with the draft law expiring on June 30, he expected that there would be legislation prior to that time.

Committee on Publication

The Chairman appointed the following Committee on Publication, which was approved by the Council: Drs. Vincent T. Williams, Kansas City, Chairman; R. O. Muether, St. Louis; Paul O. Hagemann, St. Louis; M. D. Overholser, Columbia; and John P. Ferguson, Springfield.

Employee Retirement Plan

A retirement insurance program for employees as approved by the Council in 1944 and subsequently approved by the House of Delegates was recommended placed in effect for Mr. T. R. O'Brien and Mr. Raymond McIntyre effective January 1, 1953, by the special committee appointed for this study, Drs. Hyndman, Bohrer and Buhler. The Committee also recommended that the Budget Committee include the amount necessary to place the program in effect in the 1953 budget. On motion, both recommendations were approved.

Budget

The following budget was presented by the Budget Committee and after discussion approved by the Council:

Budget for 1953

Salaries	$ 32,100.00
Journal Expense	24,340.00
Postage, Printing & Stationery	4,000.00
Travel, Executive Secretary	1,300.00
Travel, Field Secretary	2,800.00
Telephone and Telegraph	1,500.00
Office rent and light	3,000.00
Meetings and Committee expense	14,000.00
Defense	500.00
Scientific and Postgraduate work	1,000.00
Woman's Auxiliary	775.00
Public Relations	7,500.00
Insurance annuity	2,754.00
Miscellaneous general expense	2,600.00
Furniture and fixtures	1,500.00
Social Security Tax	425.00
Total	$100,094.00

Report of Committee on Cardiac Diseases

The report of the Committee on Study of Cardiac Diseases was presented by Mr. O'Brien, including resolutions on contacting voluntary agencies in the field of cardiac disease and inviting the assistance of these agencies in integrating future proposed programs in the state, and expressing the willingness of the Committee to consult with and advise the Missouri Division of Health in matters relating to control of cardiac disease.

He stated that the committee met a short time ago and studied various heart programs in the state and had approved a radio program "Know Your Heart," and also had approved the educational program which was sponsored by the Association and presented by St. Louis University through the assistance of the State Division of Health. On motion the report was accepted.

Division of Health

Dr. Amos reported on the work of the Division of Health and presented the problem of tuberculosis care, as to whether more hospitals were needed, whether present facilities should be enlarged or whether some care should be sought in present general hospitals as well as care of rural patients in Koch and Leeds Hospitals. After discussion, on motion, it was decided that this situation needed further consideration and it was voted to refer it to the Committee on Tuberculosis with the request that the Committee meet with Dr. Amos and present a report on its findings to the Council.

Improvement of Patient Care

Dr. Paul Johnstone reported on meetings of the Missouri Conference and on a fourteen state conference held recently. On motion, approval was voted for Missouri to continue representation in this fourteen state area conference. Dr. Johnstone reported that a letter to legislators regarding tax deduction for hospital care brought, in the main, favorable replies. He asked that Mr. O'Brien act as chairman of the committee to inform the people of Missouri on these recommendations to the legislators.

Dr. Johnstone stated that a definition for "chronic hospital beds" had been sought and that the following resolution had been drawn from the information obtained:

Resolutions

1. *Be it Resolved*, That the definition of a Hospital furnished by the Commission on Chronic Illness is endorsed. It is as follows: a "Hospital is defined as any institution, public or private, providing beds, facilities and services over a continuous period of 24 hours for the observation, treatment and for care of two or more non-related individuals suffering from illness, injury, deformity or abnormality; which maintains diagnostic and/or therapeutic facilities; where care or treatment is administered by or under directions of persons licensed to practice medicine."

2. *Be it Resolved*, That the United States Public Health Service definition of a Chronic Disease Hospital is endorsed. It is defined as "A hospital, the primary purpose of which is medical treatment of chronic illness, including the degenerative diseases, and which furnishes hospital treatment and care, administered by or under the direction of persons licensed to practice medicine in the State. The term includes such convalescent homes as meet the foregoing qualifications. It excludes tuberculosis and mental hospitals, nursing homes, and also institutions, the primary purpose of which is domiciliary care."

3. *Be it Resolved*, That the definition of a chronic bed in a hospital as furnished by the Commission on Chronic Illness is endorsed. It is defined as follows: "a Chronic bed in a hospital is one that has been specifically planned in terms of needs of the chronically ill person and is reserved for use of such persons."

4. *Be it Resolved*, That it is recognized that the treatment of many chronic diseases requires every physical facility and type of personnel of a general hospital; and that the technique of treatment is often similar. However, it is also recognized that additional facilities appropriate for the management of chronic illness is required. These include recreational and occupational therapy, physical therapy, informal "homelike" surroundings, privacy, etc. as opposed to the more demanding medical, surgical and nursing requirements of the acutely ill.

5. *Be it Resolved*, That it is recognized that many patients suffering from chronic diseases require hospital treatment for only a few days; but that many

others require hospital treatment for longer than thirty days. It is also recognized that when continuous hospital treatment is required for longer than thirty days, that commonly and as a rule the medical problem involved is in the chronic disease group.

6. *Be it Resolved*, That the United States Public Health Service regulation "Priority may be given to those projects in which the chronic disease facilities will be operated as sub-units of general hospitals," is regarded as particularly applicable to the State of Missouri.

On motion of Dr. Hall, the resolution was approved.

Dr. Johnstone explained the proposed nursing act which amends the present act to include practical nurses. This act was approved by the Council on October 4. He stated that letters would be sent by the Conference, together with copy of the bill, to legislators urging passage of this bill. Dr. Johnstone said that the conference felt that it was best that drastic legislation concerning nursing homes not be invoked at this time. He called attention to an article in the JAMA of October 25 on "Impact of Medical Plans on the Medical Profession" and discussed the financing of care of patients at the University of Missouri. This was referred to the Committee on Medical Economics, which already has this under study.

Rural Medical Service

Dr. Spelman gave the following report for the Committee on Rural Medical Service:

The overall picture of existing health units leaves the committee with the idea that these units, in some cases, are of value and in others, at best, are doing no good. Their usefulness seems in proportion to the interest the local doctors have in them, and in locations in which doctors are not taking an active interest there is a tendency for the public to attempt to create an organization to practice medicine.

Where the unit has trained public health doctors and nurses directing the organization, the usefulness of the organization is serving its best purpose.

It seems apparent to the committee that health units could be an opening wedge to extensive practice of medicine by groups called in from outside the community under the guise of various health organizations. The committee does not argue against this on the basis of competitively injuring private practice, but does object that such practice, in its overall aspect, decreases the quality of medicine and thus is injurious to public welfare.

To the committee it seems the usefulness of health units can be maintained and the dangers avoided only if sufficient interest can be gained among the local doctors to cause them to be active participants in helping to direct the health unit.

Enlightening the local doctor is necessary and can best be accomplished by the district Councilor meeting with county societies and discussing with them the health council and health unit plan.

Much better use of the Missouri State Medical Journal could be made to aid the individual doctor in understanding his opportunities and responsibilities in health units. Stress should be made on the point that doctors should not attempt to mandatorily direct health councils and health units. These organizations are for the general public to direct and will be failures unless the people of a community themselves have the interest and energy to promote them. The doctor, by participating, can guide and encourage healthy development.

The committee therefore recommends the Council go on record as supporting the idea and encouraging county medical societies to lend assistance to their development and operational direction.

This was discussed by Drs. Amos, Sewell and Buhler, who suggested that a synopsis of the law be published in The JOURNAL. On motion of Dr. Francka, the report was accepted.

Marion-Ralls-Shelby County Medical Society

Upon motion of Dr. Francka, the hyphenation of the Marion-Ralls and the Shelby county medical societies was approved as the Marion-Ralls-Shelby County Medical Society.

MEETING OF JANUARY 4

The Council met in St. Louis on January 4 with all Councilors and officers present.

The meeting was for the purpose of discussing the Audrain County Hospital suit and Mr. Lawrence Bradley, Kennett, attorney, reviewed the decision of the Appeals Court which was that osteopaths may practice in tax supported hospitals and pointed out that the court had avoided the defining of osteopathy. He said that they had filed for rehearing or transfer to the supreme court. He said that the case could not be appealed to the Federal Supreme Court.

Judge John B. Bradley, Kennett, reviewed the decision, pointing out that the court held that the Missouri State Medical Association was not vital in the case, according to the court, and that appellate courts were inclined to decide issues on as few points as possible; that the one in question is of political importance. He reviewed that the case had been heard before Judge Blair, that it was then turned down by the supreme court because there was no constitutional question, that all material presented before Judge Blair was then presented to the Appellate Court and was heard by that court. He pointed out that since 1945 any case of great importance may go to the state supreme court.

It was reported that the officers had approved the motion for a rehearing of the case without sanction of the Council, the time not allowing for action by the Council. On motion, duly seconded, the action of the officers in so doing was approved.

MEETING OF FEBRUARY 8

The Council met on February 8 in St. Louis with all members of the Council and all officers present.

LEGISLATION

Mr. O'Brien reviewed legislation in the present Assembly as follows: H. B. 97 dealing with the exemption of medical expense from state income tax; H. B. 108 dealing with medical assistance for the aged, children receiving aid and those permanently disabled, up to the amount of $100.00 a month while confined in a hospital or nursing home; H. B. 109 dealing with the licensing of nursing, rest and convalescent homes; S. B. 33 and H. B. 96 dealing with the requirements of coroners. S. B. 33 was read with comments from counties which it affects and it was felt that the psychiatry requirements and the pathology phase of the bill were not good. On motion of Dr. Petersen, S. B. 33 was disapproved in principle and specifically as to the wording of the requirements. Mr. O'Brien said that S. B. 165 had been introduced, which created a board of nurses examiners composed of five Registered Nurses and two practical nurses, excluded nurses aids and attendants and has control features for schools for practical nurses. The bill was endorsed in principle at a previous Council meeting.

NATUROPATHY

A pamphlet on naturopathy, stating that legislation would be introduced, was read by Mr. O'Brien. He also called attention to a booklet "Science vs. Chiropractic" which he said would be sent to each Councilor.

DISPENSING OPTICIANS

Mr. O'Brien reported that the Committee on Conservation of Eyesight had considered a bill that the

Missouri Society of Dispensing Opticians expected to introduce in the legislature. He stated that the purpose of the bill was to license dispensing opticians. On motion of Dr. Dowell, it was voted to accept the recommendation of the Committee that the legislation be approved in principle.

NATIONAL LEGISLATION

Mr. O'Brien called attention to H. R. 10-11 in the National Congress by Representatives Jenkins and Keough, which would allow deduction from income tax payment on retirement income insurance of 10 per cent of net income up to a maximum deduction of $7,500. Upon motion of Dr. Dowell, this legislation was approved and Councilors requested to contact their Congressman to that effect.

EXECUTIVE SESSION

Upon motion of Dr. Sewell, seconded by Dr. Francka, the Council went into Executive Session. (Executive Session not reported.)

AUTOPSY BILL

Copies of a proposed Autopsy Bill were distributed. On motion of Dr. Petersen the bill was approved for introduction in the legislature.

ADVISORY COMMITTEE TO S.S.S.

Dr. Allen reported that there were 47 physicians in Missouri in priority 1 of which 30 were interns and residents and that probably 14 of these would be held essential. He reported that there are 38 physicians in priority 2 and that probably only 4 of these would be held essential as of July 1. He said it was necessary that all data be submitted by June 1. He said there was indication that after July 1, the law would be based largely on the two categories of service and non-service.

TUBERCULOSIS IN MISSOURI

The report of the Committee on Tuberculosis was distributed, containing the following recommendations based on the study which the Committee had been asked to make:

1. That no new hospital facilities be constructed by the state at the present time.
2. That the Confederate Home in Higginsville not be rehabilitated and converted into a tuberculosis hospital.
3. That, should any new building be contemplated, an addition to Mount Vernon, Koch or Leeds would be the most effective course. (The Higginsville location for a new hospital would be unsatisfactory because of the necessity of duplicating basic facilities already available and assembling new hospital and medical staffs from scratch.)
4. That a further increase be made in state payments to Koch, Leeds and Webb City Sanitoriums to cover the full cost of patient care. In particular, it is urged that the state at least meet the full cost of care for patients admitted to these hospitals from areas other than St. Louis, Kansas City and Jasper County. (The fine action of the Legislature in 1951 in making available additional funds toward payment of patient care at Koch, Leeds and Webb City merits recognition, but even the current payment of $17.50 per week per patient is less than one-half the actual cost of such care.)
5. That, when and if it develops that existing public tuberculosis hospital facilities are fully in use, arrangements be made for the care of patients in private hospitals on the basis of state payment of the full cost of the care."

On motion of Dr. Francka, seconded by Dr. Dowell, the report of the Committee was accepted with commendation with the instruction that it be called to the attention of the Governor and the Legislature and the Director of Health.

BLUE CROSS-BLUE SHIELD LEGISLATION

Dr. Buhler reviewed the action of the Council at the October meeting of approving the report of the Committee on Medical Economics which opposed the introduction of legislation to place Blue Cross-Blue Shield under the State Commission on Insurance at this time. He said that a bill had been prepared by the Kansas City Plans, that a conference had been held with Judge Hoffmeister of the St. Louis Blue Cross and that the legislation would be introduced this coming week. He asked for clarification as to whether the Council would oppose the bill after it was introduced, as it had the introduction of the bill. He said the questions were: is the bill satisfactory; what will the action of the Council be, support, passivity or opposition.

The history of the formation of the plans under a pro forma decree was reviewed, calling attention to the fact that the court had granted the charter only because of the safeguards placed by the physicians and hospitals themselves.

Dr. Thompson moved that it be the opinion of the Council that it go on record as opposed to the introduction or enactment of enabling legislation for Blue Cross and Blue Shield at this time. The motion carried 13 to 1

It was suggested that representatives of the Kansas City plans be asked to meet with representatives of the Council for further clarification.

LINCOLN-ST. CHARLES SOCIETY

Dr. O'Connell moved the approval of the hyphenation of the Lincoln and St. Charles County Medical Societies as the Lincoln-St. Charles County Medical Society. On motion, this was approved.

EDITOR

Dr. Williams announced that a supply of cards was on hand for the purpose of sending news items to him. He also reported the action of the Committee on Publication of presenting awards for the best articles submitted and published in the JOURNAL by interns and residents. It was agreed that this be held for future action.

INJUNCTION LAW

Mr. O'Brien read an Injunction Law that has been approved by the State Board of Medical Examiners for introduction in the legislature. In discussion, he explained that the purpose of the bill was to curtail practice without licensure.

On motion of Dr. Bohrer, seconded by Dr. Kennedy, the bill was approved.

NEXT MEETING

Dr. Buhler announced that the next meeting of the Council would be held in St. Louis on March 7 and 8.

MEETING OF MARCH 7, 8

The Council convened in St. Louis, March 7 and 8, with all members present.

Conference on Improvement of Patient Care

A communication from Dr. Paul Johnstone, Chairman of the Conference and of the Association's representatives, asked direction of the Council in regard to hospitals which make rules regarding performing of surgical procedures on Saturday or Sunday. He asked that a statement be approved by the Council relative to such matters and that he then will refer the statement to the Joint Conference for Improvement of Patient Care. On motion of Dr. Thompson, seconded by Dr. Summers, it was voted to cooperate with Dr. Johnstone. Dr. Johnstone also called attention to H. B. 97, providing for income tax deductions for all expenses relating to medical care, and S. B. 165, the nursing practice act, both of which the Council has approved earlier.

Treasurer's Report

Dr. C. E. Hyndman, Treasurer, reported on the financial condition of the Association and stated that the financial statement for 1952 will appear in the April issue of MISSOURI MEDICINE.

American Medical Educational Foundation

Dr. James Murphy reported on a meeting of the A.M.A. Educational Foundation held in Chicago on January 25. He pointed out that contributions made to medical schools through the Foundation are matched with money from industry and, therefore, such contributions amount to much more when handled in this way. He asked that the committee for Missouri be enlarged and stationery provided for its work and on motion of Dr. Summers, seconded by Dr. Thompson, this was voted favorably. On motion of Dr. Muether, seconded by Dr. Dowell, it was voted that space be made available for dissemination of information on the Foundation at the 1953 Annual Session.

Field Secretary's Report

Mr. Ray McIntyre reported that much work had been done toward strengthening county organizations through hyphenation of smaller societies, thus making better meetings and programs possible but the county not losing its autonomy as to delegates and representation. He reported that Butler, Ripley and Wayne counties wished to hyphenate and on motion of Dr. Hall, seconded by Dr. Washburn, the hyphenation of Butler, Ripley and Wayne counties was approved and the Council requested to ask the House of Delegates to change Ripley County from the 9th District to the 10th District so that such hyphenation could be consummated. He reported that several other county societies were studying hyphenations. Speakers furnished to county societies and for Woman's Auxiliary meetings were reported, as well as medical forums for the public held in several places. Mr. McIntyre stated that between sixty and seventy physicians had located in rural Missouri during 1952. He reported attending the 8th national Conference on Rural Health held at Roanoke, Va., on February 26 to 28 and said the conference stressed the need for doctors to take more active part in local, civic and community activities. Mr. McIntyre and Dr. Buhler reported a meeting in Kansas City with interns and residents on March 5. On motion the report was accepted.

Audrain County Hospital Case

It was reported that the answer of the Supreme Court as to whether or not it would review the case should be forthcoming shortly.

Woman's Auxiliary

On motion of Dr. Sewell, it was voted to assist the Woman's Auxiliary in their expenses of their annual session as requested by a letter to the Council.

Special Session of the A.M.A.

The special session of the House of Delegates of the A.M.A. to meet in Washington, D. C., on March 14 was discussed. It was pointed out that the A.M.A. will be asked to approve elevation of the Federal Security Agency to cabinet status.

Civil Defense

Dr. Carroll Hungate announced that there would be a joint exercise in civil defense of the 5th Army and Civil Defense the latter part of April and asked the cooperation of the Councilors. On motion of Dr. Thompson, Dr. Hungate was given a vote of thanks and confidence in the work he has done for Missouri in civil defense work. On motion of Dr. Sewell, seconded by Dr. Petersen, it was voted to write a letter to the Governor commending him on his remarks on Civil Defense in his inauguration speech.

Advisory Committee to Selective Service System

Dr. Henry Allen reported briefly on the work of the Advisory Committee and answered specific questions of Councilors. He stated that a new physician draft law to replace Public Law 779 which expires June 30, 1953, will probably be passed sometime prior to June 1 and it was not assured as yet just what the law would entail.

Report of Committee on Fractures

Dr. Oscar Hampton reported for the Committee on Fractures, pointing out that the Association Committee in conjunction with the Committee on Trauma of the American College of Surgeons, had produced kits for emergency care for highway accidents, and others, and that they wished to promote the equipping of all ambulances, highway patrol cars and such with this equipment. On motion of Dr. Petersen, seconded by Dr. Bohrer, the report was accepted and the work of the two committees endorsed with encouragement that such equipment be made available. Dr. Allen offered to take the matter of necessary funds before the 1953 meeting of Missouri Lions clubs.

Legislation

Much time of the Council was spent in studying various legislation before the Missouri Assembly. Since most of it is timely right at the moment, the Council will report to the House of Delegates on legislation at the time of the Annual Session.

Dr. Buhler: The Council wishes to call the attention of the House of Delegates to several matters which are of special interest at this time.

The standing and special committees of the Association have continued the excellent work of former years. Of the 24 standing or special committees, 19 reported and the reports were included in the booklet "Reports of Officers and Committees." In addition, three other reports were received after publication date and were presented today. It is not the desire of the Council to single out for special commendation the activities of any committee because all of them are important from the standpoint of indicating to the public that our primary interest is providing better health care at all times. We believe you will agree that the results are worthy of mention at this time.

The Council wishes to announce hyphenation of the following county medical societies: Henry, Pettis and Saline counties, and Vernon-Cedar, Bates, Cass and St. Clair counties.

The following resolutions which involve the changing of counties from one Councilor District to another are presented to the House of Delegates for its action. Both are for the purpose of hyphenation to make stronger component units within the Association.

WHEREAS, For many years one of the objectives of the Association has been to increase the scientific knowledge and interest of the members, and

WHEREAS, It has been found that hyphenated societies provide a ready means for the exchange of ideas and stimulation of the membership, and

WHEREAS, Councilor District boundaries are established by the House of Delegates, and

WHEREAS, Maries County, presently an unorganized society in the Fifth Councilor District desires to hyphenate with the Phelps-Crawford-Dent-Pulaski County Medical Society, presently in the Ninth Councilor District, and

WHEREAS, The members within these counties have signified their approval of such a hyphenation, now therefore be it

Resolved, That Maries County be transferred from the Fifth Councilor District to the Ninth Councilor District in order that the proposed hyphenation may be completed.

WHEREAS, For many years one of the objectives of the Association has been to increase the scientific knowledge and interest of the members, and

WHEREAS, It has been found that hyphenated societies provide a ready means for the exchange of ideas and stimulation of the membership, and

WHEREAS, Councilor District boundaries are established by the House of Delegates, and

WHEREAS, Ripley County, presently an unorganized society in the Ninth Councilor District desires to hyphenate with Butler and Wayne counties, presently in the Tenth Councilor District to form the Butler-Ripley-Wayne County Medical Society, and

WHEREAS, the members within the three counties have signified their approval of such a hyphenation, now therefore be it

Resolved, That Ripley County be transferred from the Ninth Councilor District to the Tenth Councilor District in order that the proposed hyphenation may be completed.

The House of Delegates and the Council have previously endorsed the purposes of the American Medical Education Foundation and have urged members to contribute to the Foundation. A Scientific Exhibit, Booth S-9, has been arranged to focus attention to this worthwhile project. It will be staffed by volunteers who will explain the purposes of the Foundation, how it is functioning in cooperation with the National Fund for Medical Education in order to assist our medical schools financially so that it will not be necessary for the Federal Government to provide grants. All members are urged to visit the booth and contribute to the Foundation. All Councilors have contributed to the American Education Foundation and they will be available at the exhibit at various times to answer any questions about the Foundation.

The following legislation has been studied and followed by the Council and it wishes to report on the following bills:

LEGISLATION PASSED

S.B. 165. Changes State Board of Nursing to include two practical nurses, also provides for licensing of practical nurses on a voluntary basis. (Endorsed by Council of Missouri State Medical Association.) Passed both Houses.

LEGISLATION DEFEATED

H.B. 184. Provides for changes in Workmen's Compensation Act so that injured employee would have free choice of physician. Died in Committee.

H.B. 108. Provides that any person entitled to old age assistance, who requires treatment according to certification of a licensed physician, osteopath, chiropractor or Christian Science Practitioner, shall receive in addition to usual pension, a sum up to $100 per month, if such person is confined to a hospital or nursing, rest or boarding home. Died in Committee.

LEGISLATION PENDING

S.B. 392. Defines the practice of *Chiropractic* to be the art and science of palpating the spinal column; diagnosing, and the adjusting of the movable segments of the spinal column and tissues adjacent thereto by hand. It shall include the use of such supplementary measures as light, heat, electricity, cold, air, water, dietetics, rest and exercise. It shall not include the use of operative surgery, obstetrics, osteopathy, nor the administration or prescribing of any drug or medicine. In Senate Committee on Public Health.

S.B. 224. Provides for injunction against those practicing a profession without a license. (Endorsed by Council of M.S.M.A.) In Senate Committee on Judiciary.

S.B. 237. Provides for performance of autopsies and outlines how consent for such procedures shall be obtained. (Endorsed by Council of M.S.M.A.) In Senate Committee on Public Health.

S.B. 69. Provides that non-profit Blue Cross and Blue Shield Plans shall be under jurisdiction of State Insurance Department. (Opposed by Missouri State Medical Association.) In Senate Committee on Public Health.

S.B. 229. This bill also provides that non-profit Blue Cross and Blue Shield Plans shall be under jurisdiction of State Insurance Department. In Senate Committee on Public Health.

S.B. 343. This bill provides that the course in schools of Chiropractic shall cover a period of not less than four years of nine months each. In Senate Committee on Public Health.

H.B. 276. Provides for the creation of a State Board of *Naturopathic* Examiners; defines Naturopathy as a system of diagnosis and treatment for the prevention, alleviation and correction of human ailments by use of natural methods consisting of physiotherapy, manual or mechanical manipulation, the proper use of diet, minerals, vitamins and other substances found in the human body to assist nature in resisting and overcoming human ailments, diseases and physical conditions. In House Committee on Public Health.

H.B. 73. Provides that St. Louis County shall have the right to levy a tax of 10 cents on the $100 property valuation for public health purposes. Passed House—In Senate Public Health Committee.

H.B. 97. Provides that *all* medical expenses may be used as a deduction from state income tax. At present, the law provides that medical expenses in excess of 5 per cent of gross income are deductible. Passed House—In Senate Ways and Means Committee.

H.B. 449. Relating to Naturopathy.

H.B. 454. Relating to Naturopathy.

S.B. 422. Hospital Licensing Law.

S.B. 423. Study of Statutes dealing with the healing arts.

The Council believes that it is timely to present at this time a brief résumé of the Audrain County Hospital Case, especially the events leading up to the involvement of the Association.

The State Association connection with the Audrain County Hospital Case began in 1948 when the Executive Secretary was asked to go to a conference in Mexico at which members of the Board of Trustees of the Audrain County Hospital and several physicians were present. The Board indicated that it wanted to file a suit in the form of a declaratory judgment action, asking the court to define the rights, powers and duties of the Board from the standpoint of barring osteopaths from practicing in the hospital. This was reported to the Council and to the Community Health League and a special committee was appointed to meet with the Board, which committee tried to persuade the Board not to institute the suit.

It should be pointed out that osteopaths had practiced in the Audrain and Boone County Hospitals for many years prior to 1939. They were then barred from practicing because of a ruling by Attorney General Roy McKittrick that osteopathy was not a system of medicine. The county hospital law of 1917 provided that there shall be no discrimination between the different systems of medicine. Since, according to the McKittrick ruling, osteopathy was not a system of medicine, practitioners of osteopathy were barred from the hospital.

A legal opinion relative to the possible suit was secured for the special committee from Mr. Francis Smith, St. Joseph, former member of the Missouri Senate. Mr. Smith's opinion was that the suit should not be brought and the committee then attempted to persuade the Board of Trustees at Mexico not to file it. The Board, however, decided to proceed and in May 1949, Dr. Frank Jolley, Mexico, reported to the Council that the suit had been filed and the Chairman was instructed by the Council to obtain legal services.

Because Mr. Lawrence Bradley, of Bradley and Noble, Kennett, had assisted in the preparation of Attorney General McKittrick's ruling, he was retained. The case was heard by Circuit Judge Sam C. Blair, Jefferson City, who ruled on December 20, 1950, that:

1. The rule adopted by the Plaintiff Board of Trustees of the Audrain County Hospital dated February 27, 1940, excluding doctors of osteopathy from practicing in the Audrain County Hospital is illegal, unreasonable, discriminatory, void and of no force and effect.

2. Osteopathic physicians and surgeons are practitioners of a school of medicine and are physicians and surgeons within the meaning of the Missouri Statutes regulating their practice rights.

3. Osteopathic physicians and surgeons are entitled to take their patients to the Audrain County Hospital for treatment, subject to reasonable rules and regulations promulgated by the Board of Trustees of this Hospital.

4. A duly licensed osteopathic physician in Missouri has the right to use in his practice, in treating diseases of the human body, drugs or medical preparations and to perform operative surgery with instruments.

5. A duly licensed osteopathic physician in prescribing or administering drugs or medical preparations, or performing surgery with instruments, in the treatment of diseases of the human body, is engaged in the practice of osteopathy and is not engaged in the practice of medicine or surgery within the meaning of the Medical Practice Act.

6. Osteopathy, as taught and practiced at the American School of Osteopathy, Kirksville, Mo., is a system, method or science of treating diseases of the human body that at all times during and since 1897 has included as an integral part thereof all of the following supportive or therapeutic agents:

(1) Manipulative therapy
(2) Drugs (or medical preparations)
(3) Operative surgery with instruments.

The case was appealed to the Supreme Court which refused to consider it and ordered it transferred to the St. Louis Court of Appeals. That Court ruled as follows, December 16, 1952:

"The decree appealed from held that the rule adopted by the trustees was discriminatory and also held that osteopathic physicians and surgeons were practitioners of a school of medicine, within the meaning of the statute, and entitled to practice in public hospitals, subject to reasonable rules and regulations of the board of trustees. To this extent the decree was proper, but it then broadly set out what the court held to be the practice of osteopathy under the law. As we have stated at some lengh, the question of what an osteopath may do and the limits, if any, to his profession were not properly brought before the court and it was error for the learned trial judge to embrace a determination of those questions within the decree. By this, of course, we do not mean that we agree or disagree with the holdings of that portion of the decree, but simply that the questions were not present for the court to act upon.

"It is, therefore, the recommendation of the Commissioner that the decree be affirmed in part and reversed in part, and that we affirm and adopt the first three paragraphs of the decree of the trial court and adjudge and declare the law to be as follows:

"(1) The rule adopted by the plaintiff Board of Trustees of the Audrain County Hospital dated February 27, 1940, excluding doctors of osteopathy from practing in the Audrain County Hospital is illegal, unreasonable, discriminatory, void and of no force and effect.

"(2) Osteopathic physicians and surgeons are practitioners of a school of medicine and are physicians and surgeons within the meaning of the Missouri statutes regulating their practice rights.

"(3) Osteopathic physicians and surgeons are entitled to take their patients to the Audrain County Hospital for treatment, subject to reasonable rules and regulations promulgated by the Board of Trustees of this Hospital."

A motion was then filed asking for a rehearing of the case and, if denied, that the case be transferred to the Supreme Court. The motion was denied and in turn on March 9, 1953, the Supreme Court denied the motion to transfer.

The Council has met on four occasions since the decision was rendered to consider the future course of the Association. It was agreed that an effort should be made to have an investigation made by a governmental authority.

In addition, the Council has agreed to support with appropriate measures the action of any board of trustees of a tax supported hospital which may ask the Association for advice and help.

S.B. 423 was introduced by Senator John Noble on April 16. The bill provides for the establishment of an interim commission of the Legislature, composed of 9 persons, 3 appointed by the Governor, 3 appointed by the President Pro tem and 3 appointed by the Speaker of the House. The commission is authorized to study the laws of this state pertaining to the healing arts and to investigate the schools teaching the various branches thereof, including medicine, osteopathy, nursing, chioropractic, optometry, chiorpody, etc., in order to determine whether our statutes are adequate and to bring in recommendations for further action by the General Assembly. The Commission is to report not later than January 10, 1955.

The Council endorses Senate Bill 423 and urges the House of Delegates to approve it and urge its adoption in the present session of the General Assembly.

The Council has approved the following resolution and requests the approval of the House of Delegates:

WHEREAS, The method of the cooperative selection of interns—also known as the "matching system" has been in operation for two years under the joint sponsorship of the major national hospital associations and of the American Medical Association Council on Medical Education and Hospitals, and

WHEREAS, From the point of view of students, the new system has provided no benefit that was not provided as well, or better, under individual negotiation, but has, on the contrary, continued all that may be considered undesirable in early selection and has, further, fostered undesirable subrosa arrangements in violation of the letter and spirit of the system and its objectives, and

WHEREAS, The new method has proved ineffective in aiding hospitals to avoid confusion, but has prevented them from making firm and timely commitments with promising students, and

WHEREAS, The administration of the new system involves the annual expenditure of from $35,000 to $40,000 paid jointly by hospitals and students, and

WHEREAS, Insofar as the system is effective at all, it operates to the unfair advantage of medical school teaching centers and to the relative disadvantage of hospitals without university affiliations, particularly in rural areas, now therefore, be it

Resolved, By the House of Delegates of the Missouri State Medical Association that the cooperative or "matching" system of intern selection be abolished, and be it further

Resolved, That a copy of this resolution of protest be forwarded to each of the hospital associations that originally sponsored the system, as well as to the American Medical Association, and be it further

Resolved, That the delegates of the Missouri State Medical Association to the House of Delegates of the American Medical Association be instructed to introduce a resolution having the effect of this one at the next meeting of the American Medical Association House of Delegates.

The following report of the Committee on Mental Health was presented to the Council for action because of its current interest. The Council has approved the report and recommends to the House of Delegates that it do likewise. The report follows:

The Committee on Mental Health has been studying the model act prepared by the American Psychiatric Association for the commitment of the mentally ill. This act has the endorsement of the Council of State Governments which has printed and distributed a report "The Mental Health Program of the 48 States" which was presented at the Governors Conference in 1949. During the course of the study, H.B. 355 was introduced in the Missouri Assembly by a special subcommittee of the Appropriations Committee of the House of Representatives. This bill closely follows the so-called model act presently under study.

The Committee is aware also of the action of the Governor in recommending that a study be made of the needs and of sources of revenue of the state mental hospitals and the introduction of a resolution in the Missouri Senate by State Senator Anthony M. Webbe of St. Louis that such a study should be made by a committee of the General Assembly.

The committee is heartily in accord with the purposes as set out in the resolution of Senator Webbe and recommends that the resolution be adopted by the General Assembly. Furthermore, the committee is willing to assist the General Assembly in the conduct of the study whenever called upon.

The Committee favors H.B. 355 presently pending in the Committee on Criminal Jurisprudence of the Missouri Senate and recommends that it be adopted by the General Assembly so that it may become a law of this state.

The Committee has studied House Bill 390 presently pending in the General Assembly. It is believed that it will not be possible at this time to secure the services of a person who can fulfill the requirements of this act. It is recommended, therefore, that this act not be approved by the General Assembly. It is further recommended that an act be adopted, if needed, to permit the appointment of an Advisory Committee, composed of three doctors of medicine, especially trained in the treatment of the mentally ill, to assist the director of the Division of Mental Diseases with problems relating to the treatment of the mentally ill in our state hospitals.

The Committee recommends that a copy of this report be sent to the Governor, Honorable Phil M. Donnelly, Senator Anthony M. Webbe, to the President Pro Tem of the Senate, Senator Michael Kinney, and to the Speaker of the House, Representative Lester A. Vonderschmidt.

J. W. Thompson, M.D., St. Louis, President, announced the appointment of the Committee on Nominations as follows:

L. Paul Forgrave, St. Joseph.
B. L. Murphy, Hannibal.
A. N. Arneson, St. Louis.
Oscar P. Hampton, St. Louis.
J. W. Allee, Columbia.
C. Alex McBurney, Slater.
Frederick C. Campbell, Kansas City.
Joseph L. Johnston, Springfield.
R. E. Breuer, Newburg, Chairman.
W. O. Finney, Chaffee.

E. D. CAMPBELL, M.D., Cape Girardeau, presented the following resolution:

WHEREAS, The first order of business of the first annual meeting of the Missouri State Medical Association on November 4, 1850, was to write a "good medical practice act," and

WHEREAS, For 103 years we have been talking about such a project, but doing nothing, and

WHEREAS, A good Medical Practice Act can only become a reality by great research and legislative act, and

WHEREAS, Funds are not available for such research, and

WHEREAS, The people of Missouri will be greatly benefited by said act, now therefore, be it

Resolved, By the House of Delegates of the Missouri State Medical Association, as follows:

1. That an attorney be employed to prepare a "good medical practice act" and that said attorney be empowered to secure such assistance as is necessary.
2. That a full time legislative branch office be opened in Jefferson City, Missouri.
3. That an informational program be established for the members of our medical profession and the members of the General Assembly.
4. That said effort be financed by an annual additional assessment of $25.00 per annum.
5. That the administration of said fund be handled by the Council of the Missouri State Medical Association.

This resolution was referred to the Reference Committee on Resolutions.

DANIEL L. SEXTON, M.D., St. Louis, presented the following resolution:

WHEREAS, Certain medical services, such as X-ray and laboratory examinations and treatments, anesthesia, physical therapy treatments, electrocardiographic and electroencephalographic examinations, radioactive isotope examinations and treatment, blood transfusions, and other medical services, are regularly provided in hospitals under the direction of a physician and are usually billed to the patient on the hospital bill with the hospital and the physician concerned having separate financial arrangements, and

WHEREAS, The By-Laws of Blue Shield provide payment only to physicians for medical services, and

WHEREAS, Blue Shield now pay patients directly for these medical services when a receipted bill is presented, such procedure involving extensive bookkeeping and causing bad public relations in certain instances, and

WHEREAS, Blue Cross and Blue Shield contracts are now being made on a nation-wide basis, and

WHEREAS, It is the desire of all physicians to improve and extend volunteer medical and hospital service plans, therefore be it

Resolved, That Blue Shield organizations in Missouri may be permitted to pay hospitals, directly, under the following conditions:

(1) There will be an annual authorization filed with Blue Shield and the hospital concerned signed by the physician responsible for that medical service in that hospital identical to or similar to the following:

Date .....

I ....., being responsible for the following
Name of physician
services provided in ..... hospital, namely, ...,
....., ..., do hereby authorize Blue Shield to pay said hospital directly for said services for a period of one year from above date, it being understood that I have not or will not render a separate bill for such services either to the patient or to Blue Shield.

Signed .....

(2) In those hospitals which do not have a physician directly in charge of the department supplying such medical service, it will be assumed that the Chief of the Medical Staff, or the Chief of Medicine or Surgery, whichever service is best suited to take the responsibility, will be allowed to give the above authorization.

(3) This agreement does not apply in those cases where a physician and a hospital have the arrangement whereby the physician renders a separate bill for such medical services.

(4) In those situations where the hospital and/or the physician involved does not wish to enter such an arrangement, Blue Shield may make payments directly to the patient as it does now.

This resolution was referred to the Reference Committee on Resolutions.

JOHN GROWDON, M.D., Kansas City, presented the following resolution:

WHEREAS, The House of Delegates of the Missouri State Medical Association convenes at the time of the Annual Session of the Association and is in session or has scheduled committee meetings that conflict with the scientific program, and

WHEREAS, Members of the House of Delegates are often prevented from attending the Scientific Sessions and scientific luncheons because of duties as members of the Reference Committees and of the House of Delegates, and

WHEREAS, Meetings of the Council of the Missouri State Medical Association are necessary during meetings of the House of Delegates and such meetings prevent members of the Council from attending scientific luncheons, and

WHEREAS, The confliction of the meetings of the House of Delegates, the Council and the scientific programs interferes with and disrupts the full and complete participation of the members in the activities of the Missouri State Medical Association, therefore be it

Resolved, That the Council of the Missouri State Medical Association be instructed by this House of Delegates, to proceed with plans and arrangements for the next meeting and each subsequent meeting of the House of Delegates on such dates and at such time that the dates do not coincide with the dates of the scientific session of the annual meetings of this Association; and be it further

Resolved, That future meetings of the Council of the Missouri State Medical Association be scheduled so that they do not conflict with or coincide with the dates on which scientific programs of the Association are being presented; and be it further

Resolved, That proper amendments to the Constitution, Charter and By-laws be submitted by the Council to the House of Delegates of this Association to accomplish the purpose and intent of this resolution.

This resolution was referred to the Reference Committee on Amendments to the Constitution and By-laws.

JOHN GROWDON, M.D., Kansas City, presented the following resolution:

WHEREAS, The Board of Trustees of the American Medical Association have adopted twelve recommendations as the official position of the Association, which have been published in the *Journal of the American Medical Association* and a copy of which is attached and made a part of this resolution, and

WHEREAS, These recommendations are the result of extensive research, conferences, opinions of informed people, and

WHEREAS, Unity of opinion and recommendations will more effectively achieve a desirable revision of Public Law No. 779, therefore be it

Resolved, That the recommendations officially adopted by the Board of Trustees of the American Medical Association, be endorsed in principle and intent and approved as the official recommendations of the House of Delegates of this Association; and be it further

Resolved, That members of this Association be informed of this action in order that those who desire may so inform their Congressmen; and be it further

Resolved, That a copy of this resolution be sent by the Secretary of this Association to all members of the Congress of the United States who are the elected representatives of the people of the State of Missouri.

POSITION OF THE AMERICAN MEDICAL ASSOCIATION CONCERNING THE "DOCTOR DRAFT LAW"

The following recommendations were adopted by the Board of Trustees at its meeting on Feb. 7, 1953 and may be cited as the official position of the American Medical Association:

1. Any proposed legislation should specifically extend the primary obligation of physicians now classified in priorities 1 and 2, who are not called into service before July 1, 1953, the current expiration date of the "Doctor Draft Law."

2. An amendment should be suggested to the basic Selective Service Act which would obligate physicians covered by the basic Act for military service without permitting deferments because of dependency or marital status.

3. The Association should advocate the adoption of legislation which would provide for the recognition of military service since Sept. 1, 1939, with countries which were allies of the United States during World War II for purposes of the "Doctor Draft Law."

4. The present maximum age incorporated in the "Doctor Draft Law" (i.e., registration, age 50; obligation to serve, age 51) should be preserved.

5. The present law should be amended to require registration of physicians, under age 50, who do not have reserve commissions in the Medical Corps of the Army, Navy or Air Force.

6. Physicians who have not served since Sept. 16, 1940, should be called according to age—youngest men first—after physicians currently classified in priorities 1 and 2 have been called up or deferred for reasons of essentiality or physical disability.

7. Physicians with military service since Sept. 16, 1940, should be called according to past service—those with the least amount of service first—after physicians currently classified in priorities 1, 2 and 3 are called up or deferred for reasons of essentiality or physical disability.

8. No distinction should be made between service in World War II and service since June 1950. For purposes of computing total service, military duty either as an enlisted man or officer, with the exception of time spent in a Navy V-12 or an Army Specialized Training Program, should be included.

9. The present concept of deferring physicians regardless of their priority classification if they are essential to the national health, safety or interest should be continued.

10. Legislative authority to establish national and state medical advisory committees to the Selective Service System should be continued.

11. Any extension of the "Doctor Draft Law" should be limited to one year.

12. In an effort to insure a more equitable utilization of medical manpower by the Armed Services, the Association recommends the establishment of a new position as Assistant Secretary of Defense for Health Affairs. It appears that the proper way to provide for this would be by an amendment to the National Security Act of 1947, as amended. In this connection, it is believed that a continuing concerted effort should be made to effect a lowering of the present ratio of 3.7 physicians per 1,000 troops.

It was also agreed that in the presentation of testimony to the Congress, attention should be called to many inequitable situations currently being created by recalling physicians with prior service to military duty for the same period of time (24 months) as physicians who have never served. It was strongly recommended that a lesser period of service be established for those physicians who had at least 12 months of prior military duty since Sept. 16, 1940.

With respect to the recommendation of the House of Delegates that consideration be given to the establishment of an equitable point system for the call-up of physicians, the Board of Trustees recommended that the matter be investigated further before arriving at a final decision.

This resolution was referred to the Reference Committee on Miscellaneous Affairs.

HENRY ALLEN, M.D., St. Louis, offered the following amendments to the By-laws:

Under Chapter VII (Committees), Section 2, add to the list of committees, the following "A Committee on Laboratory Medicine."

Also at the end of the Section, add the following paragraph: "A Committee on Laboratory Medicine shall study all matters pertaining to pathology including the following subdivisions: postmorten pathology, surgical pathology, exfoliative cytology, medical bacteriology, parisitology, virology, mycology, serology, hematology, chemistry, toxicology, clinical microscopy and blood banking. On the basis of such studies, the Committee shall report annually to the House of Delegates and to the Council, whenever necessary, and shall make such recommendations as may in its judgment seem proper.

Amend Article VII (Officers), Section 2, at the end of the second sentence, delete the period and add the following "and no Councilor may be reelected to serve more than three consecutive terms" so that the sentence will read "The terms of Councilors shall be two years and no Councilor may be reelected to serve more than three consecutive terms."

Amend Article VII (Officers), Section 2, at the end of the fourth sentence by deleting the period and add the following "and may not be reelected to serve as officer or Councilor for more than six years" so that the sentence will read: "The Secretary and the Treasurer shall be elected by the Council and may not be reelected to serve as an officer or Councilor for more than six consecutive years."

These amendments were referred to the Reference Committee on Amendments to the Constitution and By-laws.

WILLARD BARTLETT, M.D., St. Louis, presented the following resolution:

WHEREAS, Good health is a requisite for fulfillment of the duties of high public office, and

WHEREAS, Citizens are entitled to be informed of the presence in candidates of disease states which may lead to important disability during tenure of office, now therefore be it

Resolved, That

1. The Executive Secretary of the Missouri State Medical Association be instructed to request of each candidate for nomination to public office, hereafter defined, that he authorize his personal physician to release to the public press a statement of the candidate's general state of health and physical fitness for the duties of such office.

2. Such request will be made of candidates for the offices of (1) President and (2) Vice-President of the United States, (3) Governor and (4) Lt. Governor of the State of Missouri, (5) United States Senator from the State of Missouri and (6) United States Congressman from the several congressional districts in the State of Missouri.

3. This request will be made by registered mail promptly after the candidate files for nomination for the designated office or is selected by nominating convention. A copy of this resolution will be enclosed. Be it further

Resolved, That:

4. A copy of this resolution be sent to the secretary of each of the state medical associations which are the components of the American Medical Association, and that

5. The delegates of the Missouri State Medical Association be instructed to introduce a similar resolution, but applicable only to candidates for the elective federal offices, previously defined, before the House of Delegates of the American Medical Association at the Annual Session in 1953.

This resolution was referred to the Committee on Miscellaneous Affairs.

The Speaker announced the rooms in which Reference Committees would meet and the time of meeting together with the following referral of reports: The reports of all committees and officers are referred to the Reference Committee on Reports of Officers, with the exception of the Treasurer's Report which is referrd to the Reference Committee on Miscellaneous Affairs. The Council's Report will be divided and the resolutions for the hyphenation of county societies will be referred to the Committee on Amendments to the Constitution and By-laws, the legislative matters to the Committee on Resolutions, the resolution on matching system for interns to the Reference Committee on Medical Education and the Report of the Committee on Mental Health to the Reference Committee on Miscellaneous Affairs.

On motion, the House of Delegates adjourned until 4:00 p.m. on Monday, April 27.

Monday, April 27, 1953

The House of Delegates convened at 4:00 p.m., on Monday, April 27, with Victor E. Scherman, M.D., St. Louis, Speaker, presiding.

Joseph C. Peden, M.D., St. Louis, gave the report of the Reference Committee on Resolutions.

REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

Mr. Speaker: In the first session of the 95th Annual Session of the House of Delegates of the Missouri State Medical Association, the resolution presented by Dr. Daniel L. Sexton of St. Louis, concerning the payment by Blue Shield to hospitals for ancillary services was referred to the Reference Committee on Resolutions. The Reference Committee on Resolutions met in Room 403 at the Municipal Auditorium, Kansas City, Missouri, and several members of the Missouri State Medical Association appeared before this Committee to discuss it. The Committee recommends the approval of this resolution.

Following motion for approval, seconded, W. W. Tillman, M.D., Springfield, stated that some members had been confused about the Committee meeting and had not had opportunity to be heard and moved that the report be referred back to the Reference Committee for further hearing. On second the motion carried.

Dr. Peden: The portions of the Report of the Council read by Dr. Buhler, were also referred to this Committee and it is recommended that the Committee endorses the action of the Council favorable to the enactment of Senate Bill 423, as introduced by Senator John Noble on April 16, 1953.

On motion, duly seconded, this was approved.

Dr. Peden: The Committee further recommends that in view of the decision of the St. Louis Court of Appeals allowing osteopaths to practice osteopathy in the Audrain County Hospital, similar tax supported hospitals desirous of changing their constitution and by-laws because of the court ruling, may, if they so desire, approach the Council of the Missouri State Medical Association for advice and guidance.

Upon motion, duly seconded, this portion of the report was approved.

Dr. Peden: The resolution pertaining to the preparation of a good medical practice act as presented by Dr. E. D. Campbell of Cape Girardeau, was referred to this Committee. Many members of the Missouri State Medical Association appeared before the Reference Committee on Resolutions and discussed this resolution. In view of the fact that the Legislature will adjourn on May 31, 1953 and will not meet again until January 1, 1955, and in the meantime the Association and the House of Delegates will meet again in 1954 in advance of the next meeting of the Legislature, and also in advance of the Primary and general elections in August and November of 1954, the Committee feels that there will be ample time to more closely study this resolution and to implement its intent, if deemed advisable, and therefore, the Committee recommends that it be referred to the Council for their serious consideration and study and report back to the House of Delegates at their next session, or at a special session of the House of Delegates if it be advisable or necessary.

We further recommend that serious consideration be given to the establishment of a branch office of information in Jefferson City.

I move that these resolutions be adopted.

Following discussion by Drs. Campbell and W. E. Henrickson, Jr., Poplar Bluff, on motion, duly seconded, on standing vote, the report of the Reference Committee was accepted.

On motion of Dr. Peden, duly seconded, the report as a whole, with the exception of the portion rereferred, was adopted.

Paul Baldwin, M.D., Kennett, reported for the Reference Committee on Miscellaneous Affairs.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Committee on Miscellaneous Affairs met at 9:30 a. m., April 27, 1953, and gave consideration to the following resolutions:

The report of the Treasurer is approved as read before the House of Delegates at the meeting on April 26.

The resolution of Dr. Growdon's recommendations for the revision of Public Law No. 779, "The Doctor Draft Law," was approved as read before the House of Delegates on April 26.

At the request of Dr. John Growdon, Kansas City, the Reference Committee, withdrew its report on this resolution that an amendment might be added.

Dr. Baldwin: The report of the Committee on Mental Health was approved with the addition of the following words "which was introduced by the subcommittee of the House" and recommends that it be adopted by the House of Delegates.

On motion, duly seconded, this was approved.

Dr. Baldwin: The resolution offered by Dr. Bartlett was discussed at length by the Committee and with Dr. Bartlett. The Committee is not in agreement with Dr. Bartlett in thinking that this is in harmony with good public relations and that it is advisable to adopt such a resolution. It is the recommendation of the Committee that it not be approved.

Following motion, duly seconded, this was discussed by Dr. Bartlett, but on vote, the report of the Committee was adopted.

On motion, duly seconded, the report as a whole was adopted.

Ben Bull, M.D., Ironton, gave the report of the Reference Committe on Medical Education and Public Welfare.

REPORT OF REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

Mr. Speaker: The Committee considered the resolution submitted by the Council regarding abolition and condemnation of the matching system of interns. The Committee approves this resolution and recommends its adoption. I move it be adopted.

On second, the report was adopted.

W. L. Allee, M.D., Eldon, gave the report of the Reference Committee on Reports of Officers.

REPORT OF REFERENCE COMMITTEE ON REPORTS OF OFFICERS

No objection to any committee report was presented before this Committee with one exception. This objection pertained to the action of the Council which is opposed to the introduction or enactment of enabling legislation for Blue Cross and Blue Shield.

However, your Committee has reviewed all reports and recommends their approval.

Following motion for adoption of the report, duly seconded, it was discussed by F. L. Feierabend, M.D., Kansas City, at the request and permission of the House to Frederick Campbell, M.D., Kansas City, delegate, and Joseph C. Peden, M.D., St. Louis. On motion of Ralph E. Duncan, M.D., Kansas City, duly seconded, the report was referred back to the Committee for further study.

George V. Herrman, M.D., Kansas City, gave the report of the Reference Committee on Amendments to the Constitution and By-laws.

The following amendments to the Constitution were considered by the Reference Committee on the Constitution and By-laws:

The published recommendations of the standing committee on Constitution and By-laws (pages 17-18-19 of your Committee Reports) were approved.

Upon motion, duly seconded, these amendments were approved.

DR. HERRMAN: The following amendments to the Constitution from the Council to the House of Delegates concerning hyphenation of Ripley County presently in the 9th Councilor District with Butler and Wayne Counties of the 10th Councilor District to form the Butler-Ripley-Wayne County Medical Society, and the hyphenation of Maries County presently in the 5th Councilor District with Phelps-Crawford-Dent-Pulaski Counties of the 9th Councilor District were discussed. We recommend their adoption on conformance.—Approved and Committee recommends they be adopted. On second, this was adopted.

DR. HERRMAN: Amend Article VII (Officers) Section 2, at the end of the second sentence, delete the period and add the following "and no Councilor may be reelected to serve more than three consecutive terms" so that the sentence will read "The terms of Councilors shall be two years and no Councilor may be reelected to serve more than three consecutive terms."

The Committee was unable to reach a decision and the suggested amendment is referred back to the House of Delegates for its action.

Following discussion, on motion, duly seconded, this was adopted.

DR. HERRMAN: Amend Article VII (Officers) Section 2, at the end of the fourth sentence, delete the period and add the following "and may not be reelected to serve as officer or councilor for more than six years" so that the sentence will read: "The Secretary and the Treasurer shall be elected by the Council and may not be reelected to serve as officer or Councilor for more than six consecutive years."

The Committee was unable to reach a decision and the suggested amendment is referred back to the House of Delegates for its action.

Following discussion, on motion, duly seconded, this was adopted.

It was pointed out that the adoption of the amendment presented to the Constitution, received the amendment to lie on the table for one year before final action by the House of Delegates.

DR. HERRMAN: The following amendment to the By-laws was considered by the Reference Committee: Under Chapter VII (Committees), Section 2, add to the list of committees, the following, "A Committee on Laboratory Medicine." Also at the end of the section add the following paragraph:

"A Committee on Laboratory Medicine shall study all matters pertaining to Pathology including the following subdivisions: Post-mortem Pathology, Surgical Pathology, Exfoliative Cytology, Medical Bacteriology, Parasitology, Virology, Mycology, Serology, Hematology, Chemistry, Toxicology, Clinical Microscopy, and Blood Banking. On the basis of such studies, the Committee shall report annually to the House of Delegates and to the Council, whenever necessary, and shall make such recommendations, as may in its judgment seem proper."

Upon motion, duly seconded, this amendment to the By-laws, having lain on the table for one day, was adopted.

DR. HERRMAN: The resolution to change the date of the House of Delegates, as follows, was considered by the Committee:

WHEREAS, The House of Delegates of the Missouri State Medical Association convenes at the time of the Annual Session of the Association and is in session or has scheduled committee meetings that conflict with the Scientific program, and

WHEREAS, Members of the House of Delegates are often prevented from attending the Scientific Sessions and Scientific luncheons because of duties as members of the Reference Committees and of the House of Delegates, and

WHEREAS, Meetings of the Council of the Missouri State Medical Association are necessary during meetings of the House of Delegates and such meetings prevent members of the Council from attending Scientific luncheons, and

WHEREAS, The confliction of the meetings of the House of Delegates, the Council and the Scientific programs interferes with and disrupts the full and complete participation of the members in the activities of the Missouri State Medical Association, therefore be it:

Resolved, That the Council of the Missouri State Medical Association be instructed by this House of Delegates, to proceed with plans and arrangements for the next meeting and each subsequent meeting of the House of Delegates on such dates and at such time that the dates do not coincide with the dates of the Scientific Session of the annual meetings of this Association; and be it further

Resolved, That future meetings of the Council of the Missouri State Medical Association be scheduled so that they do not conflict with or coincide with the dates on which Scientific programs of the Association are being presented; and be it further

Resolved, That proper amendments to the Constitution, Charter and By-laws be submitted by the Council to the House of Delegates of this Association to accomplish the purpose and intent of this resolution.

The Committee recommends that the resolution as submitted not be adopted; there certainly is room for improvement in the time schedule of the meetings and if this can be worked out within the limits of the Constitution and By-laws the committee favors such changes.

Following discussion, on motion, duly seconded, the recommendation of the Reference Committee, that the resolution be not approved but that the question be studied, was adopted.

On motion, duly seconded, the report as a whole was adopted.

C. G. STAUFFACHER, M.D., Sedalia, gave the report of the Reference Committee on Scientific Exhibits.

REPORT OF THE REFERENCE COMMITTEE ON SCIENTIFIC EXHIBITS

Mr. Speaker: The Reference Committee on Scientific Exhibits met at 2:00 o'clock this afternoon in Room 404 and the Committee nominates the following exhibits for awards: First Award, "Treatment of Essential Hypertension," Joseph C. Edwards, M.D., St. Louis; Second Award, "Common Rheumatic Diseases," Kansas City Arthritic Clinic, General Hospital No. 1; Third Award, "An Introduction to Fractures," Missouri State Medical Association Committee on Fractures and the Missouri Regional Committee on Trauma of the American College of Surgeons. I move the adoption of this report.

Upon second, the report was adopted.

PAUL R. WHITENER, M.D., Overland, gave the report for the Reference Committee on Technical Exhibits.

REPORT OF THE REFERENCE COMMITTEE ON TECHNICAL EXHIBITS

Mr. Speaker: The Reference Committee on Technical Exhibits nominates the following exhibits for awards: First Award, Warner-Chilcott Laboratories, Inc., Morris Plains, New Jersey; Second Award, Sealy Mattress Company, Kansas City; Third Award, E. R. Squibb & Sons, New York, and A. H. Robbins Company, Inc., Richmond, Virginia. I move that the Committee's report be adopted.

Upon second, the report was adopted.

The time and place of Reference Committee meetings was announced.

OSCAR P. HAMPTON, M.D., St. Louis, presented the following resolution:

WHEREAS, There are each year approximately eight accredited internships in the United States to every five Class A Medical School graduates and

WHEREAS, Many large hospitals have increased their num-

ber of internships out of proportion to bed capacity increases and clinic needs and

Whereas, These hospitals regularly get their full quota of interns and

Whereas, Many other hospitals accredited for internship are unable to secure sufficient interns and often secure none, and

Whereas, The only foreseeable solution of this problem is a more equitable distribution of interns among accredited internships, be it

Resolved, That this House of Delegates instruct the delegates to the American Medical Association from the Missouri State Medical Association to enter in that House of Delegates a resolution instructing the Council on Medical Education to consider ways and means of reducing the number of accredited internships in offending hospitals and to take other steps to insure more equitable distribution of interns.

This resolution was referred to the Reference Committee on Miscellaneous Affairs.

Ralph E. Duncan, M.D., Kansas City, presented the following resolution:

Whereas, All Officers and Delegates to the House of Delegates of the American Medical Association, with the exception of Councilors of this Association, are elected by the House of Delegates of this Association, and

Whereas, A uniformity of election will expedite and simplify the proceedings of this Association, therefore be it

Resolved, That the following sentence in Section II, Article VII of the Constitution shall be deleted: "The Secretary and the Treasurer shall be elected by the Council." And be it further

Resolved, That this amendment to the Constitution shall lay on the table for one year, in accordance with Article XI of the Constitution.

This resolution was referred to the Reference Committee on Amendments to the Constitution and By-laws.

Upon motion, duly seconded, the House of Delegates adjourned to meet on April 29 at 1:30 p. m.

Wednesday, April 29, 1953

The House of Delegates convened at 1:30 p. m., April 29, with the Speaker, Victor E. Scherman, M.D., St. Louis, presiding.

Henry Allen, M.D., St. Louis, reported for the Credentials Committee.

There obviously being more than a quorum present, on motion, the roll call was dispensed with.

Joseph L. Fisher, M.D., St. Joseph, Vice Speaker, announced the following reports of election of Councilors: Second District, W. F. Francka, M.D., Hannibal, reelected; Fourth District, Otto W. Koch, M.D., Clayton; Sixth District, C. G. Stauffacher, M.D., Sedalia; Eighth District, W. S. Sewell, M.D., Springfield, reelected; Tenth District, Frank W. Hall, Cape Girardeau, reelected.

R. E. Breuer, M.D., Newburg, gave the report of the Committee on Nominations.

REPORT OF THE COMMITTEE ON NOMINATIONS

For Vice Presidents: Guy N. Magness, M.D., St. Louis; Frank R. Teachenor, M.D., Kansas City; Thomas E. Ferrell, M.D., Springfield.

For Delegates to the American Medical Association: Joseph C. Peden, M.D., St. Louis, alternate, Walter Baumgarten, M.D., St. Louis; F. L. Feierabend, M.D., Kansas City, alternate, Rolla B. Wray, Nevada; Joseph C. Peden, M.D., St. Louis, to fill out the unexpired term of F. G. Pernoud, Sr., M.D., St. Louis, deceased, as alternate delegate for Robert E. Schlueter, M.D., St. Louis.

For Speaker of the House of Delegates: Victor E. Scherman, M.D., St. Louis; Vice Speaker, Joseph L. Fisher, M.D., St. Joseph.

On motion, duly seconded, these officers were declared elected.

L. Paul Forgrave, M.D., St. Joseph, nominated H. E. Petersen, M.D., St. Joseph, for President-Elect.

Upon motion the Secretary was instructed to cast the unanimous ballot of the House of Delegates for H. E. Petersen, M.D., St. Joseph, for President-Elect. The Secretary cast the unanimous ballot of the House of Delegates for Dr. Petersen for President-Elect and the Speaker declared Dr. Petersen so elected.

H. E. Petersen, M.D., St. Joseph: I have heard men here before the House of Delegates for the last ten or fifteen years at a time like this and I had no idea what they were going through. I have heard them and now I know what they probably felt. It is a tremendous honor and I appreciate the fact of what an honor this is, especially for some of us who have not done nearly as much as others have in the Association. I am humbly grateful for this opportunity to, in a small way, represent this body and this Association. The affairs of the Association are close to the hearts of all of us. I hope that I can earn this great honor you have given me and shall work for the wishes of the majority at all times. Thank you from the bottom of my heart.

W. L. Allee, M.D., Eldon, gave the report of the Reference Committee on Reports of Officers.

REFERENCE COMMITTEE ON REPORTS OF OFFICERS

The Committee on Reports of Officers and Committees supports the Council's action in opposing the introduction or enactment of enabling legislation for Blue Cross and Blue Shield at this time.

Upon motion, duly seconded, on standing vote the report of the Committee was adopted.

George V. Herrman, M.D., Kansas City, gave the report of the Reference Committee on Constitution and By-laws.

REPORT OF THE REFERENCE COMMITTEE ON CONSTITUTION AND BY-LAWS

The Reference Committee on Constitution and By-laws met at 2:00 p. m. on April 28. The following amendments to the Constitution were considered by the Committee:

Whereas, All Officers and Delegates to the House of Delegates of the American Medical Association, with the exception of Councilors of this Association, are elected by the House of Delegates of this Association, and

Whereas, A uniformity of election will expedite and simplify the proceedings of this Association, therefore be it

Resolved, That the following sentence in Section 2, Article VII of the Constitution shall be deleted: "The Secretary and the Treasurer shall be elected by the Council," and be it further

Resolved, That this amendment to the Constitution shall lay on the table for one year, in accordance with Article XI of the Constitution.

On motion, duly seconded, this was adopted.

Dr. Herrman: In Section 2, Chapter VII (Election of Officers), lines 5 and 6 reading "The delegates present from each Councilor District shall meet on the morning of the last day of the Annual Session and elect the Councilor from that District" be amended to read: "The delegates from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilor from that district."

Upon motion, duly seconded, this was adopted to lay on the table for one year.

Joseph C. Peden, M.D., St. Louis, presented the report of the Reference Committee on Resolutions.

REPORT OF THE REFERENCE COMMITEE ON RESOLUTIONS

Mr. Speaker, the Reference Committee on Resolutions met again on Tuesday, April 28, and held hearings relative to the resolution presented by Dr. Daniel L. Sexton of St. Louis, concerning the payment by Blue Shield to the hospitals for ancillary services and wishes to recommend that consideration of this resolution be indefinitely postponed.

Upon motion, duly seconded, the report was adopted.

Paul Baldwin, M.D., Kennett, gave the report of the Reference Committee on Miscellaneous Affairs.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Reference Committee on Miscellaneous Affairs met at 9:30 a. m., April 28, and gave consideration to the following resolutions:

The resolution for recommendation for the revision of the Doctor Draft Law was amended by deleting the word "youngest" and substituting the word "oldest" so that recommendation 6 reads as follows: "Physicians who have not served since September 16, 1940, should be called according to age—oldest men first—after physicians currently classified in priorities 1 and 2 have been called up or deferred for reasons of essentiality or physical disability."

After discussion, in which it was brought out that the wording was still not quite the intent of the resolution, on motion, duly seconded, the resolution was referred to the Council for action after conference with the several sponsors of the resolution.

DR. BALDWIN: The resolution presented by Dr. Hampton at the meeting of the House of Delegates on April 27 is approved as read at that time before the House.

Upon motion, duly seconded, this resolution was adopted, and on motion, duly seconded, the report as a whole was approved.

Kenneth Glover, M.D., Mount Vernon, asked for unanimous consent of the House of Delegates to present new business. At the request of the House that he define the new business, he read the following resolution which he wished to introduce:

Resolved, That the delegates from each Councilor District meet and appoint one member from said District to act as a liaison committee to interview a professionally trained man qualified to study legal and political problems, as well as the professional relationship between the various healing arts and sciences and recommend to the Council of the Missouri State Medical Association that he be appointed or retained. This recommendation shall be made back to the Council if possible in ninety days. Authority to appropriate funds to defray expenses for such shall be given the Council.

Upon vote, the unanimous consent of the House of Delegates was denied.

E. Claude Bohrer, M.D., West Plains, was installed as President of the Association and he and other newly elected officers repeated the oath of office with J. W. Thompson, M.D., St. Louis, retiring President.

The following appointments to committees to fill expired terms and chairmanships were announced by Dr. Bohrer and approved by the House of Delegates:

Scientific and Postgraduate Work: Paul O. Hagemann, St. Louis, Chairman; M. Pinson Neal, Columbia. Associate Members: Walter W. Tillman, Springfield; F. R. Crouch, Farmington; Maxwell G. Berry, Kansas City; Harold J. Brumm, St. Joseph; M. S. Wepprich, Washington; Alphonse McMahon, St. Louis.

Defense: C. E. Hyndman, St. Louis, Chairman; Roland S. Kieffer, St. Louis; James H. O'Neil, Kansas City.

Public Policy and Public Relations: J. W. Allee, Columbia; Jerome I. Simon, St. Louis.

Medical Education and Hospitals: W. J. Ferguson, Sikeston, Chairman; Harry K. Purcell, St. Louis; John J. Modlin, Columbia.

Cancer: E. C. Ernst, St. Louis, Chairman. Associate Members: Jack H. Hill, Kansas City; Frederick J. McCoy, Kansas City.

Medical Economics: A. P. Rowlette, Moberly, Chairman; Charles R. Doyle, St. Louis.

Mental Health: Thomas Thale, St. Louis, Chairman; Ernest H. Parsons, St. Louis; G. Wilse Robinson, Jr., Kansas City.

Maternal Welfare: Kenneth E. Cox, Kansas City, Chairman; E. E. Wadlow, St. Joseph. Associate Members: G. L. Miller, Kansas City; Willam See, Columbia; James E. Keeler, Kansas City; Helman C. Wasserman, St. Louis; A. L. Crawford, Joplin; Ora J. Gibson, Cape Girardeau.

Infant Care: Daniel N. Landau, Hannibal, Chairman; J. S. Sennott, Jefferson City. Associate Members: Guy N. Magness, University City; Joseph Conrad, Chillicothe; Robert H. Hodge, North Kansas City; W. E. Henrickson, Poplar Bluff.

Health and Public Instruction: A. W. McAlester, III, Kansas City, Chairman; Guy V. Everist, Rolla.

Constitution and By-laws: Durward G. Hall, Springfield, Chairman; Curtis H. Lohr, St. Louis; H. M. Parker, Kansas City.

Fractures: Richard H. Kiene, Kansas City, Chairman; Wilray P. Blair, St. Louis. Associate Members: Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal; Thomas G. Otto, Cape Girardeau; Ralph K. Earp, St. Louis.

Conservation of Eyesight: C. Souter Smith, Springfield, Chairman; A. N. Lemoine, Kansas City; H. B. Stauffer, Jefferson City. Associate Members: John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; George Hornback, Hannibal; C. H. Brady, Sedalia; Theodore E. Sanders, St. Louis; D. E. Eggleston, Macon.

Control of Venereal Disease: E. M. Cannon, St. Louis, Chairman; Charles C. Dennie, Kansas City; James C. Cope, Columbia. Associate Members: R. J. Murphy, Kansas City.

Industrial Health: H. M. Roebber, Bonne Terre, Chairman; S. W. Scorse, Joplin.

Diabetes: William H. Olmsted, St. Louis, Chairman; Lucien W. Ide, St. Joseph. Associate Members: Vincent J. LoPiccolo, St. Louis; A. W. Hanss, Springfield; T. L. Dwyer, Mexico.

Anesthesiology: R. M. S. Barrett, St. Louis, Chairman.

Hospital and Professional Relations: Paul N. Johnstone, Kansas City, Chairman.

Physical Medicine: Sedgwick Mead, St. Louis, Chairman; Luke A. Knese, St. Louis.

Tuberculosis: Paul Murphy, St. Louis, Chairman; I. J. Flance, St. Louis; E. E. Glenn, Springfield; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; C. A. Brasher, Mount Vernon; W. P. McDonald, St. Joseph; F. E. MacInnis, Kansas City; H. L. Greene, Hannibal.

Study of Cardiac Disease: E. Lee Shrader, St. Louis, Chairman. Associate Members: E. J. McIntire, Carthage; Earl L. Loyd, Jefferson City; W. I. Park, Springfield.

Alcoholism: Ralph E. Duncan, Kansas City, Chairman; S. D. Smith, Columbia; Kenneth Coffelt, Springfield; Joseph B. Kendis, St. Louis; George W. Forman, St. Joseph.

Rural Medical Service: A. E. Spelman, Smithville, Chairman; H. W. Carrington, Lebanon; W. A. Broyles, Bethany; W. J. Shaw, Fayette; Joseph C. Creech, Troy; Charles H. Lewellen, Louisiana; C. A. McBurney, Slater; A. J. C. McCallum, Aurora; John J. Killion, Portageville.

Dr. Bohrer stated that members of the newly formed Committee on Laboratory Medicine would be named later.

Guy N. Magness, M.D., St. Louis, invited the Association to meet in St. Louis in 1954 with the St. Louis County Medical Society and the St. Louis Medical Society as hosts.

Upon motion, duly seconded, this invitation was accepted.

The House of Delegates, upon motion duly seconded, adjourned *sine die*.

THE COUNCIL

The Council met on April 29, 1953, following the last

session of the House of Delegates of the 95th Annual Session. E. Claude Bohrer, M.D., President, presided.

Victor B. Buhler, M.D., Kansas City, was reelected Chairman of the Council.

W. S. Sewell, M.D., Springfield, was reelected Vice Chairman of the Council.

E. Royce Bohrer, M.D., Jefferson City, was elected Secretary of the Association.

Carl F. Vohs, M.D., St. Louis, was elected Treasurer of the Association.

The new members of the Council were introduced: Otto W. Koch, M.D., Clayton, Councilor of the Fourth District; C. G. Stauffacher, M.D., Sedalia, Councilor of the Sixth District.

REGISTRATION AT THE NINETY-FIFTH ANNUAL SESSION

First Councilor District—73

Allen, E. W., Carrollton
Baird, J. E., Excelsior Springs
Bauman, H. C., Maryville
Bohnsack, Ralph W., Brookfield
Brewer, Lake, Ridgeway
Bristow, A. W., Princeton
Broyles, Watkins A., Bethany
Butler, E. F., St. Joseph
Calvert, L. C., Weston
Carle, H. W., St. Joseph
Carpenter, Wallace, Rock Port
Chastain, M. W., North Kansas City
Clark, C. L., Trenton
Conrad, Joseph A., Chillicothe
Craig, Owen W. D., St. Joseph
Cullers, C. H., Trenton
Daley, Frank R., Hamilton
Dixon, John R., Brookfield
Dowell, Donald M., Chillicothe
DuMont, Clement C., St. Joseph
Edwards, Theodore F., North Kansas City
Fisher, Joseph L., St. Joseph
Forgrave, Paul, St. Joseph
Gearhart, Merriam, Bethany
Goodson, Wm. H., Liberty
Grimes, M. E., St. Joseph
Hendren, Glenn W., Liberty
Herman, Allen I., St. Joseph
Humberd, Charles D., Barnard
Imes, E. D., Maryville
Jackson, W. R., Maryville
Kearney, Elmer F., Oregon
Kirk, John S., St. Joseph
Kulowski, Jacob, St. Joseph
Lambert, Marian, Princeton
Long, Forrest C., Savannah
Longfield, F. J., Lathrop
McCracken, S. R., Excelsior Springs
McDaniel, John R., St. Joseph
McDonald, Wilbur P., St. Joseph
McGlothlan, A. B., St. Joseph
Mairs, E. J., Trenton
Matteson, Frank B., Grant City
Meluney, S. E. St. Joseph
Muench, Albert H., St. Joseph
Mullinax, Orr, St. Joseph
Mundy, H. F., St. Joseph
Musgrave, David E., Excelsior Springs
Nixon, Edward E., Gallatin
Novota, Otto J., Smithville
Perry, J. M., Princeton
Petersen, H. E., St. Joseph
Pickett, C. P., Princeton
Potter, Thompson E., St. Joseph
Quisito, J. M., Trenton
Redmond, Wm., St. Joseph
Reed, Carl H., Carrollton
Riddell, Richard V., St. Joseph
Robinson, John A., Edgerton
Rosenthal, Irwin I., St. Joseph
Rost, Wm. B., St. Joseph
Sanders, George E., Excelsior Springs
Schroeder, Sydney O., Liberty
Senor, S. E., St. Joseph
Shevlin, Charles F., St. Joseph
Smith, Clifton, St. Joseph
Spalding, W. B., Plattsburg
Spencer, Floyd H., St. Joseph
Sprong, A. A., Excelsior Springs
Thompson, F. Gregg, St. Joseph
Vandiver, V. D., Chillicothe
Wadlow, Ernest E., St. Joseph
Wilson, Fred K., Winston

Second Councilor District—29

Canella, John M., Hannibal
Damron, Edward O., Elsberry
Davis, Landis Y., Canton
Dreyer, P. V., Huntsville
Eggleston, Donald E., Macon
Fleming, J. W. Jr., Moberly
Fleming, Thomas S., Moberly
Francka, W. F., Hannibal
Haley, Roy R., Brookfield
Hawkins, G. W., Salisbury
Hoerchler, T. J., Shelbina
Hooker, John H., Clarksville
Hudson, G. R., Kirksville
Jennings, P. W., Canton
Johnson, Edward M., Macon
Kibbe, John H., Monroe City
Landau, Daniel B., Hannibal
Lanning, Robert J., Hannibal
Lewellen, Chas. H., Louisiana
Miller, Howard, Macon
Miltenberger, Val E., Kirksville
Montgomery, J. S., Milan
Murphy, B. L., Hannibal
Petty, W. S., Macon
Rice, Grover C., Brunswick
Roller, M. J., Hannibal
Rowlette, A. P., Moberly
Smith, W. J., Hannibal
Weger, Carl C., Keytesville

Third Councilor District—58

Allen, Henry C., St. Louis
Allen, Hollis, St. Louis
Arneson, A. N., St. Louis
Bartlett, Willard, St. Louis
Bassett, R. B., St. Louis
Baumgarten, Walter, St. Louis
Dalton, Arthur R., Brentwood
Dorsett, E. Lee, St. Louis
Earp, Ralph K., St. Louis
Echterhoff, Harry R., St. Louis
Edwards, Joseph C., St. Louis
Ernst, Edwin C., St. Louis
Franklin, Max S., St. Louis
Gottlieb, Leo, St. Louis
Greiner, Theodore, St. Louis
Gunn, Walter T., St. Louis
Hall, Andy Jr., St. Louis
Hampton, Stanley F., St. Louis
Harmann, Martin F., St. Louis
Hartnett, Leo J., St. Louis
Kerr, David N., St. Louis
Kohler, Louis H., St. Louis
Koon, Bernard T., St. Louis
Kountz, William B., St. Louis
LaDriere, Raymond J., Clayton
Lane, Clinton W., St. Louis
Larsen, Kenneth V., St. Louis
Litzow, Louis T., Webster Groves
Lonsway, Maurice J., Clayton
Luedde, Philip S., St. Louis
McGinnis, Byron J., St. Louis
Max, Paul F., St. Louis
Melick, Wm. F., St. Louis
Merenda, Sam J., St. Louis
Merz, Jean J., St. Louis
Meyer, Curtis A., St. Louis
Morris, Mary E., St. Louis
Mudd, J. Gerard, St. Louis
Mudd, James L., University City
Mueller, Robert, St. Louis
Muether, Raymond O., St. Louis
Munsch, A. P., St. Louis
Neilson, Arthur W., Clayton
Patton, John F., Denver, Colo.
Peden, Joseph C., St. Louis
Purcell, Harry K., St. Louis
Ries, Douglas A., St. Louis
Scherman, Victor E., St. Louis
Schlueter, Robert E., St. Louis
Sexton, Daniel L., St. Louis
Shrader, E. Lee., St. Louis
Simon, Jerome I., St. Louis
Starkloff, Gene B., St. Louis
Thompson, J. Wm., St. Louis
Vohs, Carl F., St. Louis
Weinel, Francis G., St. Louis
Weyerich, Leon F., St. Louis

Fourth Councilor District—30

Brown, E. R., University City
Diehr, M. A., St. Louis
Forsman, W. W., Affton
Freiheit, H. J., St. Louis
Gaines, Quentin M., Kirkwood
Hampton, Oscar P. Jr., St. Louis
Howe, Louis F., Brentwood
Jensen, Julius, St. Louis
Johnson, Grover C., Marthasville
Kendis, Joseph B., St. Louis
Koch, Otto W., Clayton
McMurray, H. C., Wentzville
Magness, Guy N., University City
Mays, Frank G., Washington
O'Connor, John, Overland
Randall, Don Q., St. Charles
Schattyn, Martyn, St. Louis
Shaw, Carvel T., Hermann
Steiner, A. J., St. Louis
Sterling, John D., Maplewood
Sutter, Richard A., St. Louis
Vitale, Anthony J., St. Louis
Wachter, Harry E., St. Louis
Walther, Roy A. Jr., St. Louis
Walther, Roy A. Sr., Overland
Wepprich, Michael S., Washington
Whitener, Paul R., St. Louis
Wyatt, Lois C., Kirkwood
Yoskit, Harry, Festus
Young, John S., Ladue

Fifth Councilor District—35

Allee, James W., Columbia
Allee, W. L., Eldon
Allen, William C., Glasgow
Atkins, James A., Columbia
Belden, E. A., Jefferson City
Bloom, W. A., Fayette
Bohrer, Edward R., Jefferson City
Bradford, O. F., Columbia
Caldwell, James C., Fulton
Chamberlain, G. L., New Franklin
Cooper, Maurice E., Columbia
Cope, James C., Columbia
Cremer, Wm. J., Fulton
Dwyer, Thomas L., Mexico
Garner, Lynn M., Jefferson City
Gunn, Aubrey J., Versailles
Gunn, Jack, Versailles
Huelsmann, Donald, Boonville
Jolley, J. F., Mexico
Loyd, E. L., Jefferson City
McComas, A. R., Sturgeon
Meinershagen, C. W., Jefferson City
Neal, M. Pinson, Columbia
Schwarz, Henry II, Columbia
Shaw, Wm. J., Fayette
Smith, Stephen D., Columbia
Stauffer, H. B., Jefferson City
Stephan, A. P., Jefferson City
Stewart, William J., Columbia
Summers, J. S., Jefferson City
Summers, Joseph S. Sr., Jefferson City
Taylor, Leon, Jefferson City
Washburn, J. Loren, Versailles
Windmiller, M. E., Columbia
Wood, George F., Fulton

Sixth Councilor District—35

Aiken, George A., Marshall
Allen, Claude J., Rich Hill
Allen, William H., Nevada
Beckman, Wm., Strasburg
Brown, William R., Pleasant Hill
Buehrer, Cletus E., Lawson
Campbell, A. J., Sedalia
Cooper, John M., Butler
Ellett, William H., Appleton City
Ellis, Coburn H., Garden City
Glenn, David H., Warsaw
Hansen, A. L., Butler
Haynes, R. C., Marshall
Jones, Ralph H., Sweet Springs
Jordan, Ray B., Windsor
Kennedy, R. W., Marshall
LaHue, L. D., Butler
Lederer, Charles M., Warrensburg
Lissack, Edmund, Concordia
Lusk, Charles A. Sr., Butler
Luter, Carter W., Butler
McCorkle, E. Lee, Horton, Kansas
Martin, Wilfred E., Odessa
Pascoe, James J., Nevada
Payne, B. T., Lexington
Robinson, E. E., Adrian
Schooley, R. C., Odessa
Siegel, P. V., Smithton
Simmons, S. P., Marshall
Smith, James O., Clinton
Stauffacher, C. G., Sedalia
Tracy, Herbert A., Belton
Triplett, J. S., Harrisonville
Walker, G. S., Clinton
Wray, Rolla B., Nevada

Seventh Councilor District—239

Adelman, Arthur, Kansas City
Aisenstadt, E. Albert, Kansas City
Allebach, Hobart K. B., Kansas City
Allen, William B., Kansas City
Anderson, A. Isadore, Kansas City
Andrews, B. W., Kansas City
Andrus, Bailey C., Kansas City
Arms, Arnold V., Kansas City
Aschman, Theodore H., Kansas City
Atcheson, Bellfield, Kansas City
Atwell, Floyd C., Kansas City
Ball, J. E., Kansas City
Ballard, V. Bryce, Kansas City
Becker, Richard R., Kansas City
Berger, Dan L., Kansas City
Bergmann, Victor H., Kansas City
Berry, M. G., Kansas City
Biggs, Harry L., Kansas City
Bills, Marvin L., Kansas City
Blumenschein, John C., Independence
Bohan, P. T., Kansas City
Boley, J. O., Kansas City
Bond, M. B., Kansas City
Bourke, T. S., Kansas City
Boutros, Amin, Kansas City
Bowser, John F., Kansas City
Brams, Jack B., Kansas City
Brown, Irwin S., Kansas City
Broyles, Glen H., Kansas City
Brumm, L. W., Kansas City
Brust, Carl H., Mission, Kan.
Buckingham, W. W., Kansas City
Buckner, Robert C., North Kansas City
Buhler, Victor B., Kansas City
Caldwell, John K., Kansas City
Campbell, Frederick B., Kansas City
Carbaugh, Glenn C., Kansas City
Carlson, Hjalmar E., Kansas City
Carmichael, F. A. Jr., Kansas City
Carrier, Edson C., Kansas City
Casebolt, Milton B., Kansas City
Cheeseman, William B., Kansas City
Coburn, Donald F., Kansas City
Coffey, Ralph R., Kansas City
Cope, Joseph S., Kansas City
Counsell, Chester M., Kansas City
Cox, Kenneth E., Kansas City
Culbertson, W. F., Baltimore, Md.
Dennie, Charles C., Kansas City
Diveley, Rex L., Kansas City
Doane, William L., Grandview
Dodge, Mark, Kansas City
Dodge, Milton, Kansas City
Dorsch, Ervin H., Independence
Downey, James W., Kansas City
Duncan, Ralph E., Kansas City
Duncan, William H., Kansas City
Dwyer, H. L., Kansas City
Eldridge, Charles J., Kansas City
Elliott, B. Landis, Kansas City
Encel, Lawrence P., Kansas City
Eubank, Dillard M., Raytown
Eubank, Wm. R., Kansas City
Farney, Jacob P., Kansas City
Farnsworth, Jesse J., Kansas City
Feierabend, Frank L., Kansas City
Feist, George V., Kansas City
Ferris, Carl R., Kansas City
Findley, J. W., Kansas City
Fitzgerald, Robert H., Kansas City
Flanders, H. F., Kansas City
Forsythe, Robert W., Kansas City
Frick, John Paul, Kansas City
Ganley, William Coyle, Kansas City
Gaskins, John H., Kansas City
Gestring, Hugh A., Kansas City
Getelson, Joseph, Kansas City
Gilkey, Harry M., Kansas City
Gillmor, C. Stewart, Kansas City
Gist, Wm. W., Kansas City
Glasscock, Ernest L., Kansas City
Goldman, Max, Kansas City
Grauerholz, J. W., Kansas City
Green, John R., Independence
Greene, W. Wallace, Kansas City
Griffith, John A., Kansas City
Growdon, John, Kansas City
Hall, T. B., Kansas City
Hallberg, J. W., Kansas City
Hamilton, Hugh G., Kansas City
Hardacre, Ruth A., Kansas City
Haynes, S. E., Kansas City
Herrman, George V., Kansas City
Hess, Paul D., Kansas City
Hibbard, Blaine Z., Kansas City
Hill, Jack H., Kansas City
Hodgson, Frank H., Kansas City
Hogan, Daniel F., Kansas City
Hoeper, Sam D., Grandview
Hoffman, Jacob S., Kansas City
Hoffmann, R. Lee, Kansas City
Hogue, Frank S., Kansas City
Holton, Edward B., Independence
Howard, John C., Kansas City
Hughes, Gerald E., Kansas City
Hungate, Carroll P., Kansas City
Hunt, Claude J., Kansas City
Hurwitt, Frank, Kansas City
Jackson, Wm. R., Kansas City
Jansen, Robert, Kansas City
Jarvis, James A., Kansas City
Johnson, Paul A. G., Kansas City
Johnstone, Paul N., Kansas City
Jones, George H., Kansas City
Jones, T. Reid, Kansas City
Kantor, Julius M., Kansas City
Keeler, James E., Kansas City
Kelly, E. H., Kansas City
Kerr, Russell W., Kansas City
Kiene, Richard H., Kansas City
Kitchen, William M., Kansas City
Knight, Lyle B., Lee's Summit
Korth, William M., Kansas City
Kranson, Seymour J., Independence
Kyger, Fred, Kansas City
Kyner, Thomas A., Kansas City
Laffoon, F. L., Raytown
Lapi, Ruth M., Kansas City
Lapp, Harry C., Kansas City
Latham, Raymond W., Kansas City
Layton, Ira C., Kansas City
Lecklitner, Myron D., Kansas City
LeMoine, Albert N., Kansas City
Levey, Harry B., Kansas City
Lewis, Revis C., Kansas City
Lichtor, A., Kansas City
Lyddon, H. R. Jr., Kansas City
McAlester, A. W. III, Kansas City
McAlester, A. W. Jr., Kansas City
McCoy, Frederick J., Kansas City
McDonnell, John F., Kansas City
McMillan, Thomas E., Kansas City
McVay, James R., Kansas City
McVay, James R. Jr., Kansas City
MacInnis, Florence E., Kansas City
Mantz, Herbert L., Kansas City
Major, Hermon S., Kansas City
Melgaard, S. Ross, Kansas City
Miles, George O., Kansas City
Miller, Clint L., Lee's Summit
Miller, Gerald L., Kansas City
Mixson, William C., Kansas City
Monahan, E. P., Kansas City
Morest, F. S., Kansas City
Moss, Paul, Kansas City
Mueller, Martin J., Kansas City
Murphy, Robert J., Kansas City
Myers, Robert M., Kansas City
Needels, Orval T., Kansas City
Nickson, Charles E., Jr., Independence
Niedermeyer, F. P., Kansas City
Nigro, D. M., Kansas City
Noltensmeyer, Milton H., Kansas City
O'Brien, Raymond W., Kansas City
O'Connell, Paul J., Kansas City
Ogilvie, John H., Kansas City
O'Neil, James H., Kansas City
Owens, Robert H., Kansas City
Pakula, Sidney F., Kansas City
Parker, Hubert M., Kansas City
Pearson, Paul E., Kansas City
Peete, Don Carlos, Kansas City
Peterson, Milton C., Kansas City
Petry, E. L., Kansas City
Pipkin, Garrett, Kansas City
Poorman, Bert A., Kansas City
Porter, Louis, Kansas City
Potter, L. G., Kansas City
Rader, Ada B., Martin City
Rising, Jesse D., Kansas City
Roberts, Harold M., Kansas City
Robinson, E. Kip, Kansas City
Robinson, G. Wilse, Kansas City
Rodgers, Samuel U., Kansas City
Rubin, Sidney, Kansas City
Russell, Robert K., Kansas City
Schaerrer, Wm. C., Kansas City
Schultz, Loraine E., Kansas City
Schutz, C. B., Kansas City
Seely, Clark W., Kansas City
Shapiro, L. M., Kansas City
Shelden, Russell D., Kansas City
Sheldon, John G., Kansas City
Singleton, J. Milton, Kansas City
Skogg, A. L., Kansas City
Sneid, Philip, Kansas City
Stacey, Wallace R., Independence
Staggs, William A., Kansas City
Statland, Harry, Kansas City
Steffen, Lawrence F., Kansas City
Stewart, Robert H., Kansas City
Stockwell, A. Lloyd, Kansas City
Stratemeier, Edward H., Kansas City
Tarson, Solomon S., Kansas City
Tasker, Charles B., Kansas City
Teachenor, Frank R., Kansas City
Thiessen, Edward H., Kansas City
Thomason, H. E., Kansas City
Trippe, H. C., Kansas City
Trowbridge, Barnard C., Kansas City
Trowbridge, E. H., Jr., Kansas City
Twyman, Richard A., Kansas City
Unger, Harold, Kansas City
Upsher, Albert E., Kansas City
Van Biber, James T., Independence
Virden, C. Edgar, Kansas City
Wade, Frederick E., Kansas City
Wakefield, Franklin H., Kansas City
Walker, James C., Kansas City
Wall, Harry C., Kansas City
Walthall, Damon, Kansas City
Watson, Ethel, Independence
Webster, Joseph G., Kansas City
Welker, Jos. E., Kansas City
White, Charles H., Mission, Kansas
White, Edwin C., Kansas City
White, Stoughton F., Kansas City
Wilhelm, Warren F., Kansas City
Williams, Delon A., Kansas City
Williams, Joseph C., Jr., Kansas City
Williams, Luke E., Kansas City
Williams, Vincent T., Kansas City
Wilson, Clifford C., Kansas City
Winkelman, Esther, Kansas City
Wood, Lawrence E., Kansas City
Wortmann, Robert F., Kansas City
Wright, R. Paul, Kansas City
Ziegler, Allen M., Kansas City
Zuber, Harold V., Kansas City

Eighth Councilor District—53

Amos, James R., Springfield
Arnold, H. M., Lamar
Brasher, C. A., Mount Vernon
Clinton, Lloyd B., Carthage
Coates, C. C., Joplin
Coffelt, Kenneth C., Springfield
Conrad, R. C., Springfield
DeTar, B. E., Joplin
Duncan, Robert D., Springfield
Feller, C. E., Springfield
Ferguson, John P., Springfield
Ferguson, Robert M., Webb City
Ferrell, Thomas E., Springfield
Fessenden, E. M., Springfield
Freeman, Hal E., Springfield
Glenn, Elmer E., Springfield
Glover, Kenneth, Mount Vernon
Grantham, Sam A., Joplin
Griffin, Evelyn, Buffalo
Griffin, O. A., Buffalo
Hall, Durward G., Springfield
Hamilton, E. H., Joplin
H'Doubler, F. T., Springfield
Hill, John J., Eldorado Springs
Hoover, H. Lee, Springfield
Hughes, S. B., Clinton
Jennings, R. J., Windsor
Johnson, Wm. F., Springfield
Johnston, J. L., Springfield
Knapp, Rudolf, Golden City
Lockhart, Charles E., Springfield
McBurney, C. A., Slater
MacDonnell, Thomas M., Marshfield
Maples, Floyd H., Mount Vernon
Marshall, W. J., Springfield
Mickel, Arthur A., Cassville
Musick, J. D., Springfield
Newman, Mary, Cassville
Peterson, Stanley S., Springfield
Rainwater, E. H., Springfield
Scorse, Sidney W., Joplin
Sewell, W. S., Springfield
Siceluff, J. C., Springfield
Silsby, Harry, Springfield
Smith, C. Souter, Springfield
Stokes, J. B., Excelsior Springs
Threadgill, J. M., Forsyth
Tillman, Walter W., Jr., Springfield
Turner, Glenn O., Springfield
White, R. Ned, Springfield
Wommack, Fred L., Crane
Wood, George H., Carthage
Yancey, Daniel L., Springfield

Ninth Councilor District—22

Bohrer, E. Claude, West Plains
Breuer, R. E., Newburg
Buckthorpe, Thelma C., Sikeston
Bugg, A. F., Ellington
Burns, T. J., Houston
Butts, James D., St. James
Capetti, A. P., Aurora
Carrington, H. W., Lebanon
Connor, S. W., Mountain Grove
Cooper, C. W., Thayer
Cotton, T. W., Van Buren
Feind, E. E., Rolla
Everist, Guy V., Rolla
Harrell, R. E., Lebanon
Hope, James L., Lebanon
Kozal, F. L., Belle
Kramer, Scott G., Houston
Russell, Barbara E., Rolla
Stricker, E. A., St. James
Summers, J. H., Lebanon
Underwood, M. K., Rolla
Wiles, Jack N., West Plains

Tenth Councilor District—20

Baldwin, Paul, Kennett
Beecher, S. B., Caruthersville
Bull, Ben M., Ironton
Campbell, Edward D., Cape Girardeau
Crowe, John T., Cape Girardeau
Davis, Wilbur L., Charleston
Elrod, D. B., Cape Girardeau
Estes, Albert M., Cape Girardeau
Ferguson, Wilson J., Sikeston
Finney, W. O., Chaffee
Hall, Frank W., Cape Girardeau
Henrickson, W. E., Poplar Bluff
Hoctor, Emmett F., Farmington
Kinder, James, Cape Girardeau
Nienstedt, E. J., Sikeston
Reeder, Charles C., New Madrid
Roebber, H. M., Bonne Terre
Smith, A. B., Sikeston
Wilson, Charles F., Cape Girardeau
Zimmerman, Joe A., Kennett

Guest Speakers—11

Blackburn, Charles M., Rochester, Minn.
Brown, Willis E., Little Rock, Ark.
Campbell, Darrell A., Ann Arbor, Mich.
Dorner, Ralph A., Des Moines, Iowa
Gellis, Sydney S., Boston, Mass.
Hirschberg, J. Cotter, Topeka, Kansas
Jackson, Arnold S., Madison, Wisc.
Macomber, Douglas W., Denver, Colo.
Miller, Herbert C., Overland Park, Kansas
Pfuetze, Karl H., Chicago, Ill.
Wescoe, W. Clarke, Kansas City, Kansas

Guest Physicians—28

Bare, E. F., Kansas City
Becker, Reinhard, Vancouver, Wash.
Blankenship, Charles F., Kansas City
Bruce, Paul C., Excelsior Springs
Colbert, James W., Jr., St. Louis
Copeland, Sam P., Kansas City
Cramer, Quentin, Kansas City
Gumper, L. S., Dayton, Ohio
Hobbs, Geo. H., Mt. Vernon
Jones, Edna M., Northville, Mich.
Jung, F. T., Evanston, Ill.
Knight, R. Lynn, Kansas City
Mantell, F. J., Excelsior Springs
Massy, Ragland A., Trinidad, British West Indies
Mosser, Robert S., St. Paul, Minn.
Multhauf, C. J., Kansas City
Neighbor, G. P., Kansas City, Kansas
Pugh, R. G., Independence
Pullen, Roscoe L., Columbia
Russell, Richard Lee, Kansas City
Sohlberg, Robert, Jr., McPherson, Kansas
Sullivan, J. B., Sweet Grass, Mont.
Thacher, L. K., Santa Barbara, Calif.
Thomas, N. K., Tucson, Ariz.
Tillman, L. M., Kansas City
Tripodi, E. W., Excelsior Springs
Tucker, Claude C., Wichita, Kansas
Van Besien, George J., Kansas City

There were 46 interns and residents; 96 medical technologists; 64 physical therapists; 198 exhibitors and 86 guests. There was 1,122 total registration.

BOOK REVIEW

CENTURY OF MEDICINE, A, in Jacksonville and Duval County, by Webster Merritt, M.D., University of Florida Press, Gainesville. 1949.

"A Century of Medicine in Jacksonville and Duval County" by Webster Merritt, M.D., deals with the medical problems and personalities of that part of Florida from the arrival of the first American physician, Dr. James Hall, at the end of the 18th century to the establishment and early growth of the State Board of Health at the end of the 19th century. In his preface, the author states that his interest in the subject began in 1936, when he established his practice in Jacksonville and found that the records of the county and state medical societies had been destroyed by fire in 1901.

The book is arranged chronologically, with the outstanding physicians, medical events, epidemics and general growth of the city and county described for each period, and gives considerable insight into the medical problems and methods of treatment and quarantine, not only for American medicine in general but for this subtropical area in particular. Of special interest are the frequent drawings and photographs scattered through the book, and the pictorial maps of Jacksonville in 1847, which serve as end papers. M. H.

TAKE ADVANTAGE OF YOUR LOCAL SANBORN SERVICE STATION

It stands ready to provide you with

- expert technician service on all Sanborn instruments
- emergency loan Sanborn instruments
- complete stocks of daily-use supplies and accessories

and to demonstrate

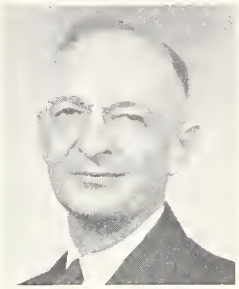
THE SANBORN VISO CARDIETTE

today's foremost electrocardiograph

Your local Service Center is:

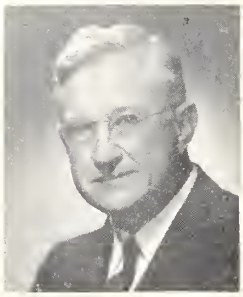
SANBORN COMPANY *Branch Office*
634 North Grand Boulevard
St. Louis, Mo., *Phone* Lucas 7740

Officers of the Missouri State Medical Association

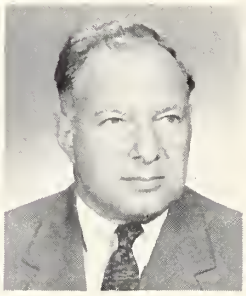


E. CLAUDE BOHRER, M.D.
West Plains
President

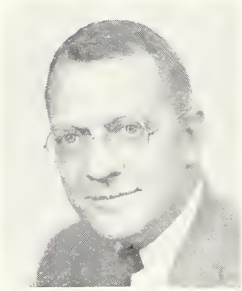
H. E. PETERSEN, M.D.
St. Joseph
President-Elect



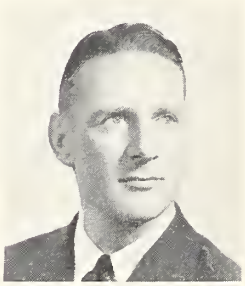
CARL F. VOHS, M.D.
St. Louis
Treasurer



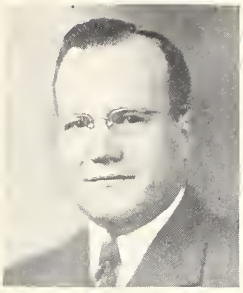
E. ROYCE BOHRER, M.D.
Jefferson City
Secretary



V. T. WILLIAMS, M.D.
Kansas City
Editor



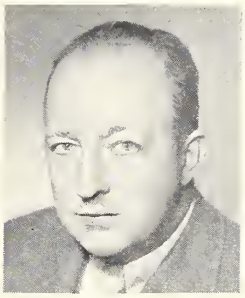
VICTOR B. BUHLER, M.D.
Kansas City
Chairman of the Council and Councilor of the Seventh Councilor District



W. S. SEWELL, M.D.
SPRINGFIELD
Vice Chairman of the Council and Councilor of the Eighth Councilor District

DONALD M. DOWELL, M.D.
CHILLICOTHE
Councilor of the First Councilor District

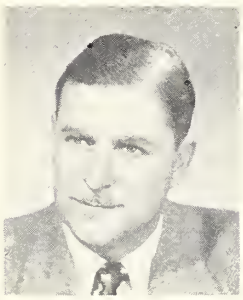
W. F. FRANCKA, M.D.
HANNIBAL
Councilor of the Second Councilor District



R. O. MUETHER, M.D.
ST. LOUIS
Councilor of the Third Councilor District

OTTO W. KOCH, M.D.
CLAYTON
Councilor of the Fourth Councilor District

J. LOREN WASHBURN, M.D.
VERSAILLES
Councilor of the Fifth Councilor District



C. G. STAUFFACHER, M.D.
SEDALIA
Councilor of the Sixth Councilor District

J. H. SUMMERS, M.D.
LEBANON
Councilor of the Ninth Councilor District

FRANK W. HALL, M.D.
CAPE GIRARDEAU
Councilor of the Tenth Councilor District

Towns and County

A

Adrian, Bates County
Affton, St. Louis County*
Albany, Gentry County
Altenburg, Perry County
Anderson, McDonald County
Appleton City, St. Clair County
Ash Grove, Greene County
Ashland, Boone County
Aurora, Lawrence County
Ava, Douglas County

B

Bakersfield, Ozark County
Ballwin, St. Louis County*
Barnard, Nodaway County
Barnhart, Jefferson County
Beaufort, Franklin County
Belle, Maries County
Belton, Cass County
Bethany, Harrison County
Birch Tree, Shannon County
Bismarck, St. Francois County
Bloomfield, Stoddard County
Blue Springs, Jackson County
Bolckow, Andrew County
Bolivar, Polk County
Bonne Terre, St. Francois County
Boonville, Cooper County
Bowling Green, Pike County
Branson, Taney County
Brashear, Adair County
Braymer, Caldwell County
Breckenridge, Caldwell County
Brentwood, St. Louis County*
Bridgeton, St. Louis County*
Brookfield, Linn County
Brookline Station, Greene County
Browning, Linn County
Brunswick, Chariton County
Bucklin, Linn County
Buffalo, Dallas County
Burlington Junction, Nodaway County
Butler, Bates County
Bynumville, Chariton County

C

Cabool, Texas County
California, Moniteau County
Camdenton, Camden County
Cameron, Clinton County
Campbell, Dunklin County
Canton, Lewis County
Cape Girardeau, Cape Girardeau County
Cardwell, Dunklin County
Carl Junction, Jasper County
Carrollton, Carroll County
Carthage, Jasper County
Caruthersville, Pemiscot County
Cassville, Barry County
Cedar Hill, Jefferson County
Centerville, Reynolds County
Centralia, Boone County
Chaffee, Scott County
Charleston, Mississippi County
Chesterfield, St. Louis County*
Chillicothe, Livingston County
Clarksville, Pike County
Clayton, St. Louis County*
Clinton, Henry County
Coatsville, Schuyler County
Cole Camp, Benton County
Columbia, Boone County
Conception Junction, Nodaway County
Concordia, Lafayette County
Conway, Laclede County
Cooter, Pemiscot County
Crane, Stone County
Creve Coeur, St. Louis County*
Crocker, Pulaski County
Crystal City, Jefferson County
Cuba, Crawford County

D

Dearborn, Platte County
Delta, Cape Girardeau County
Desloge, St. Francois County
DeSoto, Jefferson County
Dexter, Stoddard County
Diamond, Newton County
Dixon, Pulaski County
Doniphan, Ripley County
Downing, Schuyler County
Drexel, Cass County

E

East Prairie, Mississippi County
Edgerton, Platte County
Edina, Knox County
Eldon, Miller County
El Dorado Springs, Cedar County
Ellington, Reynolds County
Elsberry, Lincoln County
Essex, Stoddard County
Eugene, Cole County
Eureka, St. Louis County*
Excello, Macon County
Excelsior Springs, Clay County

F

Fairfax, Atchison County
Farmington, St. Francois County
Faucett, Buchanan County
Fayette, Howard County
Fenton, St. Louis County*
Ferguson, St. Louis County*
Festus, Jefferson County
Fillmore, Andrew County
Flat River, St. Francois County
Florissant, St. Louis County*
Forsyth, Taney County
Fredericktown, Madison County
Fulton, Callaway County

G

Gallatin, Daviess County
Galt, Grundy County
Garden City, Cass County
Gideon, New Madrid County
Glasgow, Howard County
Glendale, St. Louis County*
Golden City, Barton County
Goodman, McDonald County
Gordonville, Cape Girardeau County
Granby, Newton County
Grandview, Jackson County
Grant City, Worth County
Green City, Sullivan County
Greenfield, Dade County
Green Ridge, Pettis County

H

Hale, Carroll County
Hamilton, Caldwell County
Hannibal, Marion County
Harrisonville, Cass County
Hartville, Wright County
Hayti, Pemiscot County
Herculaneum, Jefferson County
Hermann, Gasconade County
Hermitage, Hickory County
Higbee, Randolph County
Higginsville, Lafayette County
Hillsboro, Jefferson County
Holden, Johnson County
Hopkins, Nodaway County
Hornersville, Dunklin County
Houston, Texas County
Houstonia, Pettis County
Humansville, Polk County
Hume, Bates County
Huntsville, Randolph County

I

Iantha, Barton County
Illmo, Scott County
Independence, Jackson County
Ironton, Iron County

J

Jackson, Cape Girardeau County
Jefferson Barracks, St. Louis County*
Jefferson City, Cole County
Jennings, St. Louis County*
Joplin, Jasper County

K

Kahoka, Clark County
Kansas City, Jackson County
Kennett, Dunklin County
Keytesville, Chariton County
Kimmswick, Jefferson County
King City, Gentry County
Kirksville, Adair County
Kirkwood, St. Louis County*
Knob Noster, Johnson County
Knox City, Knox County
Koch, St. Louis County*

L

La Belle, Lewis County
Laddonia, Audrain County
Ladue, St. Louis County*
La Grange, Lewis County
Lakeview Heights, Benton County
Lamar, Barton County
La Monte, Pettis County
Lancaster, Schuyler County
La Plata, Macon County
Lathrop, Clinton County
Lawson, Ray County
Leadwood, St. Francois County
Leasburg, Crawford County
Lebanon, Laclede County
Lee's Summit, Jackson County
Lemay, St. Louis County*
Lexington, Lafayette County
Liberty, Clay County
Licking, Texas County
Lilbourn, New Madrid County
Lockwood, Dade County
Louisiana, Pike County

M

Macks Creek, Camden County
Macon, Macon County
Malden, Dunklin County
Manchester, St. Louis County*
Mansfield, Wright County
Maplewood, St. Louis County*
Marceline, Linn County
Marionville, Lawrence County
Marshall, Saline County
Marshfield, Webster County
Marston, New Madrid County
Marthasville, Warren County
Martin City, Jackson County
Maryville, Nodaway County
Maysville, DeKalb County
Mayview, Lafayette County
Mendon, Chariton County
Mexico, Audrain County
Miami, Saline County
Middletown, Montgomery County
Milan, Sulivan County
Miller, Lawrence County
Moberly, Randolph County
Mokane, Callaway County
Monett, Barry County
Monroe City, Monroe County
Montgomery, Montgomery County
Montrose, Henry County
Morehouse, New Madrid County
Morrisville, Polk County
Mound City, Holt County
Mountain Grove, Wright County
Mountain View, Howell County
Mount Moriah, Harrison County
Mount Vernon, Lawrence County

N

Naylor, Ripley County
Neelyville, Butler County
Neosho, Newton County
Nevada, Vernon County
New Bloomfield, Callaway County
Newburg, Phelps County
New Florence, Montgomery County
New Franklin, Howard County
New Haven, Franklin County
New London, Ralls County
New Madrid, New Madrid County
Niangua, Webster County
Normandy, St. Louis County*
North Kansas City, Clay County
Norwood, Wright County

O

Oak Grove, Jackson County
Oak Ridge, Cape Girardeau County
Odessa, Lafayette County
O'Fallon, St. Charles County
Oran, Scott County
Oregon, Holt County
Osceola, St. Clair County
Overland, St. Louis County*
Owensville, Gasconade County
Ozark, Christian County

P

Pacific, Franklin County
Palmyra, Marion County
Paris, Monroe County
Parkville, Platte County
Parma, New Madrid County
Pattonsburg, Daviess County
Pattonville, St. Louis County*
Paynesville, Pike County
Peculiar, Cass County
Perry, Ralls County
Perryville, Perry County
Pickering, Nodaway County
Piedmont, Wayne County
Pierce City, Lawrence County
Pilot Grove, Cooper County
Pineville, McDonald County
Platte City, Platte County
Plattsburg, Clinton County
Pleasant Hill, Cass County
Polo, Caldwell County
Popular Bluff, Butler County
Portage Des Sioux, St. Charles County
Portageville, New Madrid County
Potosi, Washington County
Prairie Hill, Chariton County
Princeton, Mercer County

R

Raytown, Jackson County
Reeds, Jasper County
Reeds Spring, Stone County
Republic, Greene County
Rich Hill, Bates County
Richland, Pulaski County
Richmond, Ray County
Richmond Heights, St. Louis County*
Ridgeway, Harrison County
Rivermines, St. Francois County
Roanoke, Howard County
Robertson, St. Louis County*
Rockaway Beach, Taney County
Rock Hill, St. Louis County*
Rockport, Atchison County
Rolla, Phelps County
Rosendale, Andrew County
Rothville, Chariton County
Russellville, Cole County

S

St. Charles, St. Charles County
St. Clair, Franklin County
Ste. Genevieve, Ste. Genevieve County
St. James, Phelps County
St. Joseph, Buchanan County
St. Louis City*
St. Marys, Ste. Genevieve County
Salem, Dent County
Salisbury, Chariton County
Sappington, St. Louis County*
Sarcoxie, Jasper County
Savannah, Andrew County
Sedalia, Pettis County
Sedgewickville, Bollinger County
Senath, Dunklin County
Seneca, Newton County
Seymour, Webster County
Shelbina, Shelby County
Shelbyville, Shelby County
Shrewsbury, St. Louis County*
Sikeston, Scott County
Silex, Lincoln County
Slater, Saline County
Smithton, Pettis County
Smithville, Clay County
South West City, McDonald County
Spickard, Grundy County
Springfield, Greene County
Steele, Pemiscot County
Steelville, Crawford County
Stella, Newton County
Stockton, Cedar County
Stoutland, Camden County
Strafford, Greene County
Strasburg, Cass County
Sturgeon, Boone County
Sullivan, Franklin County
Sumner, Chariton County
Sweet Springs, Saline County

T

Tarkio, Atchison County
Thayer, Oregon County
Tina, Carroll County
Tindall, Grundy County
Tipton, Moniteau County
Trenton, Grundy County
Troy, Lincoln County

U

Union, Franklin County
Unionville, Putnam County
University City, St. Louis County
Urbana, Dallas County
Urich, Henry County

V

Valley Park, St. Louis County*
Van Buren, Carter County
Vandalia, Audrain County
Versailles, Morgan County
Vigus, St. Louis County*
Villa Ridge, Franklin County

W

Walnut Grove, Greene County
Warrensburg, Johnson County
Warrenton, Warren County
Warsaw, Benton County
Washington, Franklin County
Waverly, Lafayette County
Waynesville, Pulaski County
Webb City, Jasper County
Webster Groves, St. Louis County*
Wellsville, Montgomery County
Wentzville, St. Charles County
Weston, Platte County
West Plains, Howell County
Whiteside, Lincoln County
Willard, Greene County
Willow Springs, Howell County
Windsor, Henry County
Winfield, Lincoln County
Winona, Shannon County
Winston, Daviess County

* May belong to St. Louis County or to St. Louis Medical Society.

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

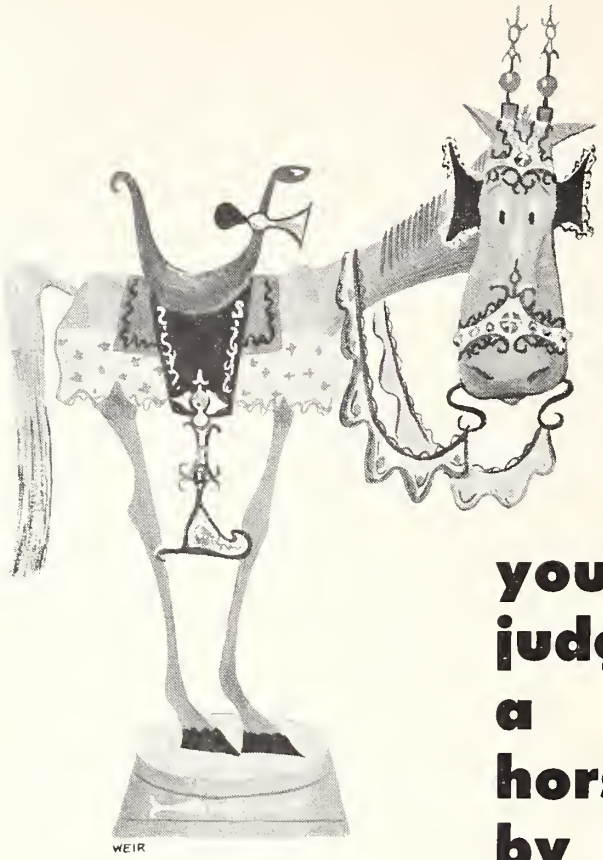
(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
HOMER V. CAPPARELL, M.D.
LEROY E. BOSTIAN, M.D.

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*



you can't judge a horse by its HARNESS

AND you can't compare BLUE CROSS and BLUE SHIELD with other coverage, simply by looking at the shining trappings.

An extra special daily room rate may look big in dollars and cents . . . but small when weighed against a semi-private room paid in full, regardless of the hospital's charges.

A stated dollar allowance for "extras" may look generous, but prove pitifully inadequate when the bill is made up for drugs, dressings, oxygen, and those other services provided as needed, without regard to amount or cost.

When comparing Blue Cross and Blue Shield with any other coverage, look deeper than the surface. **Find out how much of the dollar paid in is returned in hospital and medical care.**

Dollar for dollar, the best investment and the greatest return is in non-profit BLUE CROSS and BLUE SHIELD!

BLUE CROSS
BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

Kansas City
Saint Louis

Alphabetical List of Members

A

Aaron, George A., Kansas City
Abell, Walter E., St. Louis
Abrams, Morris, St. Louis
Ackerman, Lauren V., St. Louis
Adams, Noah, Kansas City
Adelman, Arthur, Kansas City
Adler, Benard C., St. Louis
Agress, Harry, St. Louis
Ahlefeld, Charles B., Kansas City
Aiken, G. A., Marshall
Aiken, Richard F., Marshall
Aisenstadt, E. Albert, Kansas City
Aitken, Louis F., St. Louis
Alberty, Omer L., Carl Junction
Albrecht, Franklin H., St. Louis
Alden, Arthur M., St. Louis
Aldrich, James T., St. Louis
Alex, Morris, St. Louis
Alexander, Harry L., St. Louis
Alford, Leland B., St. Louis
Allaman, J. M., St. Joseph
Allebach, H. K., Kansas City
Allee, James W., Columbia
Allee, Warren L., Eldon
Allen, Charles E., Kansas City
Allen, C. H., Independence
Allen, Claude J., Rich Hill
Allen, Duff S., St. Louis
Allen, Erroll W., Carrollton
Allen, Henry C., St. Louis
Allen, Hollis N., St. Louis
Allen, Horace E., Columbia
Allen, Jerry H., Springfield
(Member Boone County)
Allen, Joseph E., Columbia
Allen, Melvin A., Clayton
Allen, Robert E., Kansas City
Allen, Sylvia, Kansas City
Allen, Willard M., St. Louis
Allen, William B., Kansas City
Allen, William C., Glasgow
Allen, William E., Jr., St. Louis
Allen, William H., Nevada
Allen, William H., Jr., Hume
Almada, Albert A., Stockton, Calif.
(Member Buchanan County)
Alsop, Webb S., Jr., Kansas City
Althaus, Carl J., St. Louis
Altheide, Harvey E., Rock Hill
Altheide, J. Paul, St. Louis
Altomare, Edw. P., Kansas City
Altringer, Arthur N., Kansas City
Alvis, Bennett Y., St. Louis
Alvis, Edmund B., St. Louis
Amacker, Dempsey T., St. Louis
Ambrose, Olney A., St. Louis
Ames, Alfred C., Mountain Grove
Ames, William H., St. Joseph
Amos, James R., Springfield
Andersen, Elmer J. T., Montgomery City
Anderson, A. Isadore, Kansas City
Anderson, Raymond B., Kansas City
Anderson, Richard W., Kansas City
Anderson, W. Connelly, Kansas City
Andrae, Robert L., Louisiana
Andreassen, Dimil F., Sullivan
Andrews, Berneil W., North Kansas City
Andrews, Raleigh K., St. Louis
Andrus, Bailey C., Kansas City
Anstey, George, St. Louis
Anthony, Dallas, Springfield
Appleberry, Charles H., Flat River
Aquino, Philip J., Caruthersville
Arbuckle, Millard F., St. Louis
(Member Jefferson County)
Archer, Perry C., Shelbyville
Arms, Arnold V., Kansas City
Armstrong, John H., Kirkwood
Arneson, Axel N., St. Louis
Arney, William G., St. Louis
Arnold, Eugene L., St. Louis
Arnold, Herbert M., Lamar
Aronberg, Lawrence M., St. Louis
Arst, Daniel B., Bloomfield
Arzt, Franz, St. Louis
Aschman, Theodore H., Kansas City
Asel, Norman D., Camp Carson, Colo.
(Member Boone County)
Asher, Arthur G., Kansas City
Ashley, Hugh V., Cape Girardeau
Ashley, Hugh, Jr., Cape Girardeau
Ashley, Thomas E., Springfield
Atcheson, Bellfield, Kansas City, Kansas
(Member Jackson County)
Atherton, Mary Jean, Springfield
Atkins, James A., Columbia
Atwell, Floyd C., Kansas City
Atwood, J. Morris, Prairie Village, Kansas
(Member Grand River Medical Society)
Atwood, William G., Carrollton
Aubin, Francis W., Branson
Aubuchon, William E., Leadwood
AufderHeide, G. Russell, St. Louis
Aull, John, Kansas City
Austin, Martin G., St. Louis
Avery, Bruce F., St. Louis
Ayars, Treston R., St. Louis

B

Baber, John C., Jr., Little Rock, Ark.
(Member St. Louis Medical Society)
Backlar, Joseph, Richmond Heights
Baer, Alvin J., Kansas City
Bagby, James W., St. Louis
Baggerly, Walter E., Montrose
Bailey, Frank A., St. Louis
Bailey, Fred W., St. Petersburg, Fla.
(Member St. Louis Medical Society)
Bailey, S. M., St. Simon Island, Ga.
(Member Dunklin County)
Bailey, William H., St. Louis
Bailey, William H., Perryville
Baird, J. Edward, Excelsior Springs
Baker, Cecil G., Iowa City, Iowa
(Member St. Louis Medical Society)
Baker, Cecil H., St. Louis
Baker, James M., Columbia
Baker, Josephine D., Moberly
Baker, William M. St. Louis
Baldwin, Paul, Kennett
Bales, Eugene L., Carrollton
Ball, James E., Kansas City
Ballard, Volney B., Kansas City
Banet, Samuel R., St. Louis
Barber, John J., Address Unknown
(Member Greene County)
Bardenheier, J. Phil, St. Louis
Barelli, Pat A., Kansas City
Barger, O. B., Harrisonville
Barker, Jesse W., St. Louis
Barnard, Charles A., Portage des Sioux
Barnes, Francis M., St. Louis
Barnes, Raymond F., Webster Groves
Barnes, Seth S., Cape Girardeau
Barnett, C. H., Bolivar
Barnett, Floyd A., Paris
Barnett, Gordon P., Kansas City
Barnett, Julian H., Kirkwood
Baron, William, St. Louis
Barone, Paul L., Nevada
Barrett, Ralph M. S., Clayton
Barrett, Scott R., St. Louis
Barry, Gerald W., Kansas City
Barry, William B., Kansas City
Barrymore, Eugene, Bowling Green
Bartels, Leo G., St. Louis
Bartlett, Robert W., St. Louis
Bartlett, Willard, Jr., Clayton
Bartnick, Mitchel L., St. Louis
Baskett, Edgar D., Columbia
Bassett, John W., San Francisco, Calif.
(Member St. Louis Medical Society)
Bassett, Robert B., St. Louis
Bassett, Sam A., Richmond Heights
Battersby, Richard S., Columbia
Bauer, John D., St. Louis
Bauer, Joseph A., St. Louis
Bauer, Louis, St. Louis
Bauer, Robert A., St. Louis
Baum, Frank E., Kansas City
Bauman, Charles M., St. Louis
Bauman, Henry C., Maryville
Baumgarten, Walter, Jr., St. Louis
Baumhardt, Edward E., Kansas City
Bawell, Malcolm B., St. Louis
Bay, Merrill R., Blue Springs
Beall, Homer, Malden
Beam, Sim F., St. Louis
Beare, J. Byron, St. Louis
Beasley, L. Kenneth, St. Louis
Beatie, W. R., Springfield
Beatty, Arch J., Boston, Mass.
(Member Jackson County)
Bechtold, Frederick F., Little Rock, Ark.
(Member Greene County)
Beck, Leroi, St. Joseph
Becke, William G., St. Louis
Beckemeyer, W. Albert, Sedalia
Becker, Edward J., St. Louis
Becker, George H., St. Louis
Becker, Richard R., Kansas City
Beckett, Theodore C., Boonville
Beckette, Edmund S., St. Louis
Beckham, Genevieve S., St. Louis
Beckman, William, Strasburg
Bee, James E., Kansas City
Beecher, Sheldon B., Caruthersville
Beem, John R., St. Louis
Beers, Ellsworth G., Seymour
Behan, Lawrence G., Dallas, Texas
(Member Lincoln-St. Charles County)
Behrens, Donald T., St. Louis
Beil, J. Wallace, Kansas City
Beisbarth, Albert, St. Louis
Beisbarth, Carl C., St. Louis
Belaval, Gustavo S. Kansas City, Kansas
(Member Jackson County)
Belden, Edgar A., Jefferson City
Bell, Charles T., Maryville
Bell, Exter F., Jr., Houston, Texas
(Member Dunklin County)
Bell, John M., St. Joseph
Bell, Robert M., St. Louis
Bell, William F., Lee's Summit
Belot, Monti L., Independence
Belsey, Wallace A., Campbell
Benincasa, Anthony V., St. Louis
Benjamin, Durand, St. Louis
Bennett, C. Edward, Kirkwood
Bennett, James D., Kansas City
Bennett, Joseph S., Independence
Benson, Scott C., St. Joseph
Berard, Louis N., St. Louis
Berg, Ralph, St. Louis
Berger, Dan Langston, Kansas City
Berger, Edward J., St. Louis
Bergman, Hugo F., St. Louis
Bergmann, Martin, Brentwood
Bergmann, Victor H., Kansas City
Bergner, Grace E., St. Louis
Berland, Harry I., St. Louis
Berman, Joseph P., St. Louis
Berman, William, St. Louis
Berney, Francis J., St. Joseph
Bernreiter, Michael, Kansas City
Bernstorff, Paul H., Jennings
Berry, John W., St. Louis
Berry, Maxwell G., Kansas City
Berry, Paul T., Marceline
Bersche, Bertram L., St. Louis
Berwald, Irwin I., St. Louis
Bess, William E., Sedalia
Best, Robert, Higginsville
Bettonville, Paul J., Jr., Clayton
Bickel, James T., Lamar
Bickel, Vern T., Lamar
Bickford, Wallace M., Address Unknown
(Member Saline County)
Bieri, Earl J., St. Louis
Bierman, Max J., Clayton
Biggins, Cloice H., St. Joseph
Biggs, Fred J., Jr., Poplar Bluff
Biggs, Harry L., Raytown
Biggs, James B., Bowling Green
Bills, Marvin L., Kansas City
Bilotta, Laurence A., Orlando, Fla.
(Member St. Louis Medical Society)
Bilsky, Nathan, St. Louis
Bindbeutel, Arthur H., St. Louis
Bindbeutel, D. A., Seattle, Wash.
(Member St. Louis Medical Society)
Birdsall, Thomas C., St. Louis
Birenboim, Irvin M., Kansas City
Birney, Wm. P., Hannibal
Birsner, Frank H., Carthage
Birsner, Louis J., St. Louis
Bishop, Marion D., Florissant
Bishop, Wm. T., Sedalia
Bisno, Daniel, St. Louis
Blache, J. Owen, St. Louis
Black, Donald R., Kansas City
Black, Eugene C., Kansas City
Black, James M., St. Louis
Black, Mervin H., Joplin
Black, Wm. D., St. Louis
Blacklock, David E., King City
Blackman, Nathan, Kirkwood
Blackmore, Thos. A., Windsor
Blair, Vilray P., Florissant
Blair, Vilray P., Jr., St. Louis
Bland, Warren W., Vandalia
Blanke, Otto T., Joplin
Blankenship, George W., Anderson
(Member Jasper County)
Blasko, John J., Washington, D. C.
(Member Callaway County)
Blaylock, Richard D., Oak Ridge
Bleyer, Adrien S., St. Louis
Block, Arnold S., St. Louis
Bloom, W. A., Fayette
Bloomer, Joseph A., Maryville
Blumenschein, J. C., Independence
Bock, L. H., St. Louis
Bockelman, Clifford H., Brentwood

Boedeker, Roy V., St. Louis
Boemer, Lilburn C., St. Louis
Boger, J. W., Sedalia
Bohan, Peter T., Kansas City
Bohne, Wm. R., St. Louis
Bohnsack, Ralph W., Brookfield
Bohrer, E. Claude, West Plains
Bohrer, Edward R., Jefferson City
Bohrer, Harry C., St. Louis
Boldizar, Albert G., St. Louis
Boldt, Thomas H., St. Louis
Boles, Clifford R., Clayton
Boley, James O., Kansas City
(Member Cooper County)
Bolgar, Bartholomew, Festus
Bond, Marcus B., Kansas City
Bond, Van H., Hornersville
Bondurant, Bryce H., Kirkwood
Boody, Robert J., Kansas City
Booth, Herbert R., Hamilton
Boots, Roger H., Springfield
Border, Charles T., Kansas City
Borenstine, Joseph, Kansas City
Bortnick, Arthur R., St. Louis
Boteler, George M., Clarinda, Tex.
(Member Buchanan County)
Boughnou, Harvey P., Kansas City
Bourke, Timothy S., Kansas City
Boutros, Amin, Kansas City
Bowdern, Edward H., St. Louis
Bowerman, Harold H., Clayton
Bowersox, Warren A., St. Louis
Bowman, M. C., Neosho
Bowser, John F., Kansas City
Box, Earnest M., Springfield
Boyd, Arthur M., St. Louis
Bozzo, Raymond J., Washington
Bradford, Oscar F., Columbia
Bradley, Frank R., St. Louis
Brady, Charles H., Sedalia
Brady, Hugh S., Concordia
Bragdon, George H., Reeds
Brainard, Benj. F., Martin City
Brams, Jack B., Kansas City
Brand, Earl LeRoy, Webster Groves
Brandon, John P., Essex
Brandon, W. L., Poplar Bluff
Brasher, Ben H., Lexington
Brasher, Charles A., Mt. Vernon
Bredall, Jerome J., Perryville
Breid, Jacob, Spickard
Bremser, Harry L., St. Louis
Brennan, John A., Farmington
(Member St. Louis Medical Society)
Brennan, Raymond J., Chillicothe
Brennan, Robert A., St. Louis
Brennan, Robert V., St. Louis
Brenner, Paul A., Owensville
Brereton, Robert L., Chesterfield
Breuer, Robert E., Newburg
Brewer, Lake, Ridgeway
Bricker, Eugene M., St. Louis
Bridges, James R., Kahoka
Briegleb, Chas. F., Columbus, Ohio
(Member Franklin-Gasconade-Warren County)
Briscoe, John R., Maplewood
Bristow, Arthur S., Princeton
Bristow, George B., Marysville, Calif.
(Member Grand River Medical Society)
Bristow, Robert B., St. Joseph
Britt, Robert E., St. Louis
Brockelman, Emmy M., St. Louis
Brockelman, Erich, St. Louis
Brodeur, Armand E., Fall Church, Va.
(Member St. Louis Medical Society)
Bromberg, Leon, St. Louis
Brooker, R. M., Kansas City, Kansas
(Member Buchanan County)
Brookes, Henry S., Jr., St. Louis
Brookes, Robert D., St. Louis
Brookreson, Alton F., Poplar Bluff
Brooks, Arthur C., St. Louis
Brooks, John M., Diamond
Brossard, Pierre M., Maplewood
Broun, Goronwy O., St. Louis
Brown, Adrian J., Kansas City
Brown, Charles W., Caruthersville
Brown, Daniel W., St. Louis
Brown, E. Eugene, St. Louis
Brown, Eugene R., University City
Brown, Irwin S., Kansas City
Brown, James B., St. Louis
Brown, John E. Perry
Brown, John J., Fulton
Brown, Lyman D., Springfield
Brown, Robert S., Orange, Tex.
(Member Jackson County)
Brown, Seymour, St. Louis
Brown, William R., Pleasant Hill
Brown, William S., St. Louis
Brown, Wilson G., Houston, Texas
(Member St. Louis County)
Brownfield, Samuel T., Brookfield
Broyles, Glen H., Kansas City
Broyles, Watkins A., Bethany
Bruce, Helen L., St. Louis
Bruce, James G., Jefferson City
Bruce, Leo A., Sikeston
Brumm, Harold J., St. Joseph
Brumm, Lawrence W., Kansas City
Bruner, Claude R., Columbia
Bruner, Robert E., Kansas City
Brust, Carl H., Mission, Kansas
(Member Jackson County)
Bruton, Tyrrel S., Springfield
Bryan, James H., St. Louis
Bryan, Theodore L., Camp Atterbury, Ind.
(Member St. Louis Medical Society)
Bryan, William T. K., St. Louis
Bublis, Mary D., Temple, Texas
(Member St. Louis Medical Society)
Bublis, Norbert J., Temple, Texas
(Member St. Louis Medical Society)
Buck, Ronald, St. Joseph
Buck, Ulysses G., Rothville
Buckingham, William, Kansas City
Buckner, Robert C., Kansas City
Buckthorpe, Thelma C., Sikeston
Buddy, Edward P., St. Louis
Budke, Harold A., Kansas City
Budke, Robert J., St. Charles
Buehler, Carl T., Jr., Eldon
Buehrer, Cletus E., Lawson
Bugg, Andrew F., Ellington
Buhler, Victor B., Kansas City
Bulger, Harold A., St. Louis
Bull, Ben M., Ironton
Bumgarner, James E., Prairie Village, Kansas
(Member Lafayette-Ray County)
Bunch, James R., Nevada
Bunten, Joseph C., Branson
Bunting, Williston P., Kansas City
Burch, John E., Joplin
Burford, Cyrus E., St. Louis
Burford, E. Humber, St. Louis
Burford, Thomas H., Clayton
Burke, J. P., Jr., Albuquerque, N. Mex.
(Member Moniteau County)
Burke, Robert J., Scott Air Force Base, Ill.
(Member St. Louis Medical Society)
Burke, Walter H., Springfield
Burney, Wallace S., Miller
Burns, Beryl I., Kansas City
Burns, Francis J., St. Louis
Burns, Francis R., Hannibal
Burns, Jonathan E., Charles Town, W. Va.
(Member Jackson County)
Burns, Stanley S., St. Louis
Burns, Stanley S., Jr., St. Louis
Burns, Thomas J., Houston
Burst, Donald O., St. Louis
Burst, Emil A., St. Louis
Busch, Anthony K., St. Louis
Busiek, Paul J., Springfield
Busiek, Urban J., Springfield
Bussmann, Donald W., Clayton
Butcher, Harvey R., Jr., St. Louis
Butler, E. F., Carrollton
(Member Buchanan County)
Butterworth, Nelson S., Joplin
Butts, James D., St. James
Byars, Louis T., St. Louis
Byers, Philip L., Kansas City
Byland, Benjamin F., Maryville
Byland, Samuel J., Wellsville
Byrd, Homer E., Carthage
Byrne, John E., St. Louis
Byrns, Robert E., St. Louis

C

Caciappo, Joseph E., St. Louis
Cain, Alvin R., Lamar
Cain, Arthur S., Jr., Kansas City
Cain, Charles F., Caruthersville
Caldwell, James C., Fulton
Caldwell, John K., Kansas City
Calkins, Delevan, St. Louis
Calkins, William G., Kansas City
Callaway, G. D., Springfield
Callaway, Guy D., Jr., Springfield
Callaway, Luther M., Kansas City
Callihan, C. F., West Plains
Calodney, Martin M., St. Louis
Calvert, Lewis C., Weston
Cameron, Solon, St. Louis
Campbell, Albert J., Sedalia
Campbell, Cecil S., St. Louis
Campbell, Edward D., Cape Girardeau
Campbell, Frederick B., Kansas City
Campbell, James E., Macon
Campos, Francisco J., St. Louis
Canella, John M., Hannibal
Canepa, Francis J., St. Louis
Canepa, John B., St. Louis
Canlas, Emilio M., Poplar Bluff
Cannady, J. E., Sedalia
Cannon, Edw. M., St. Louis
Canty, Eugene J., St. Charles
Capell, Clarence S., Kansas City
Capetti, Alex P., Aurora
Cappel, Powel B., St. Louis
Caravelli, Anthony F., St. Louis
Carbaugh, Glenn C., Kansas City
Cardwell, Clarence, Stella
Carle, H. W., Jr., St. Joseph
Carleton, Charles E., Jr., St. Louis
Caslin, Albert L., Stanberry
Carlisle, John B., Sedalia
Carlson, Hjalmar E., Kansas City
Carlton, Chas. E., Stoutland
Carmichael, Francis A., Jr., Kansas City
Carney, Joseph E., Jr., St. Louis
Carpenter, George T., St. Joseph
Carpenter, George W., Chillicothe
Carpenter, Wallace, Rockport
Carr, A. D., St. Louis
Carrier, Edson C., Kansas City
Carrier, John A., Affton
Carrington, Howard W., Lebanon
Carroll, George A., St. Louis
Carroll, Grayson, St. Louis
Carron, Oscar A., Perryville
Carter, Harvey W., Sikeston
Carter, Howard, Browning
Carter, James R., Neosho
Casberg, Melvin A., Washington, D. C.
(Member St. Louis Medical Society)
Case, James W., Jr., West Plains
Casebolt, Buford T., Kansas City
Casebolt, Milton B., Kansas City
Casey, Edwin J., St. Louis
Casey, Shederic A., Lebanon
Casford, Ralph S., Kansas City
Cason, Elbert H., St. Louis
Cassel, Melvin A., St. Louis
Cassidy, Leslie D., St. Louis
Castelaw, Rush E., Kansas City
Castles, Charles C., Caruthersville
Castles, John E., Kansas City
Catanzaro, Anthony F., St. Louis
Cavaness, Ernest W., Leucadia, Calif.
(Member Jackson County)
Cavender, Savino W., Address Unknown
(Member St. Louis Medical Society)
Chalkley, Judson I., Columbia
Chamberlain, Gilbert L., New Franklin
Chambers, James Q., Jr., Kansas City
Chamness, James T., St. Louis
Chandler, Orville B., Osceola
(Member Semo County)
Chapman, Arthur H., Fort Worth, Texas
(Member St. Louis Medical Society)
Chapman, J. R., Steele
Chapman, Samuel B., Kansas City
Chatman, Eugene P., Kansas City
Charles, Benjamin H., St. Louis
Charles, Cecil M., St. Louis
Charnas, Raymond M., St. Louis
Chastain, Maurice W., North Kansas City
Cheeseman, Wm. B., Kansas City
Cherre, Charles J., Norfolk, Va.
(Member St. Louis Medical Society)
Chiarottino, Joseph F., St. Joseph
Chiasson, E. Chaille, Columbia
Chieffi, Margaret, St. Louis
Chilton, James C., Hannibal
Chute, W. Deward, Moberly
Ciapciak, Stanley J., St. Louis
Claiborne, Edward G., Camdenton
Clancy, James F., St. Louis
Clapsaddle, Clare J., Ste. Genevieve
Claridge, Ralph A., St. Louis
Clark, Chester L., Trenton
Clark, Harold B., Kansas City
Clark, James F., St. Louis
Clarke, Michael J., Springfield
Clasen, Arthur C., Kansas City
Clay, Calvin, St. Charles
Clay, Hampson S., Poplar Bluff
Clayton, Edgar L., Springfield
Cleary, Frank, St. Louis
Cleveland, Horace F., Long Beach, Calif.
(Member St. Louis Medical Society)
Cline, Edward W., Poplar Bluff
Cline, Harold H., Piedmont
(Member Mineral Area County)
Cline, Jesse A., Oran
Clinton, Lloyd B., Carthage
Clithero, W. H., St. Louis
Coates, Charles C., Joplin
Coates, Thomas A., St. Louis
Coburn, Donald F., Kansas City
Cochrane, Joseph J., Kansas City
Cockerell, Sanford F., Independence

Cofer, James C., Kennett
Coffelt, Kenneth C., Springfield
Coffey, James L., Fairfax
Coffey, Ralph R., Kansas City
Coffin, Ernest L., Portage, Maine (Member St. Louis Medical Society)
Coffin, Helen K., Kansas City
Coffin, Theodore A., Kansas City
Coffman, Esther E. L., St. Louis (Member Ozarks County)
Cohen, Benjamin H., St. Louis
Cohen, Frank, St. Louis
Cohen, Harry K., Kansas City
Cohen, Hilliard, Kansas City
Cohen, Louis, St. Louis
Cohle, Richard R., University City
Cohnberg, Rosellen E., Monett
Cohrs, Clarence C., Moberly
Coil, Paul E., Mexico
Colby, Buford M., Hale (Member Jackson County)
Coldwater, Kenneth B., Jefferson Barracks
Coleman, William G., St. Louis
Colgate, Cleon E., Amarillo, Texas (Member St. Louis County)
Coller, Frederick C., Springfield
Collier, Alfred, Chillicothe
Collins, John M., Affton
Collodi, George A., St. Louis
Comboy, Lawrence J., Independence
Commerford, James J., Crystal City
Compton, James R., St. Louis
Cone, Alfred J., Chesterfield
Conley, Dudley S., Columbia
Connell, Evan S., Kansas City
Connor, John J., St. Louis
Connor, Samuel W., Mountain Grove
Conover, Chas. C., Kansas City
Conrad, Adolph H., St. Louis
Conrad, Adolph H., Jr., St. Louis
Conrad, Joseph A., Chillicothe
Conrad, Marshall B., St. Louis
Conrad, Raymond C., Springfield
Conrad, Robert W., St. Joseph
Cook, James T., St. Louis
Cook, Jerome E., St. Louis
Cook, Norman L., Cape Giradeau
Cook, O. W., Caruthersville
Cook, Ralph L., University City
Cook, Robert J., Brentwood
Cooke, Francis W., Caruthersville
Cooke, Jean V., St. Louis
Cooper, Claude W., Thayer
Cooper, Henry T., St. Louis
Cooper, John H., Kansas City
Cooper, John M., Butler
Cooper, Lawrence E., Cooter
Cooper, Maurice E., Columbia
Cooper, R. Lee, Warrensburg
Cope, James C., Columbia
Cope, Joseph S., Kansas City
Copher, Glover H., St. Louis
Cordonnier, Justin, St. Louis
Cornell, John C., St. Louis
Correnti, Nicholas A., St. Louis
Cortner, Mary C., Kansas City
Cory, Harriet S., St. Louis
Cossins, Carlos E., St. Joseph (Member Nodaway-Atchison-Gentry-Worth County)
Costa, Dominic V., St. Louis
Costello, Cyril J., St. Louis
Costello, Joseph P., St. Louis
Costello, Joseph P., Jr., St. Louis
Costen, Jas. B., St. Louis
Costrino, John J., St. Louis
Costrino, Joseph A., St. Louis
Cotton, Tolman W., Van Buren
Cottrell, Wilson P., Reeds Spring
Coughlin, Bertrand D., St. Louis
Coulter, Robert L., Jr., St. Louis
Counsell, Chester M., Kansas City
Cowan, R. D., Aurora
Cowherd, Joseph B., Kansas City
Cox, Kenneth E., Kansas City
Cox, William A., Jefferson City
Craig, Arthur D., Springfield
Craig, Irwin T., Joplin
Craig, Owen W. D., St. Joseph
Craig, W. E., Address Unknown (Member Jasper County)
Cramb, Arthur B., Spofford, N. H. (Member North Central Counties)
Crawford, Archie L., Joplin
Crawford, Katherine J., St. Louis
Crawford, Oral B., Springfield
Creane, John C., St. Louis
Creech, Joseph C., Troy
Creekmore, Maurice A., Jefferson Barracks
Crego, Clarence H., Jr., St. Louis
Cremer, Wm. J., Fulton
Cresswell, George F., Potosi
Crews, Robert N., Fulton
Crider, Russell J., St. Charles
Critchlow, Wm. C., Sikeston
Crites, Edward, Sedgewickville
Crossen, Robert J., St. Louis
Crossman, Robert W., Webster Groves
Crouch, F. Richard, Farmington
Crowe, John T., Cape Girardeau
Crowell, Hugh C., St. Louis
Culbertson, William F., Baltimore, Md. (Member Jackson County)
Cullers, Chas. H., Trenton
Cummings, James H., St. Louis
Cummins, Walter F., Kansas City
Cunningham, Eric A., Louisiana
Curl, Howard, Joplin
Curran, Edward J., Kansas City
Curran, Kevin E., Kansas City
Curran, Maurice D., Kansas City
Cutcliff, Daniel J., Kansas City
Cutler, Harold M., St. Louis
Cutler, Harry, St. Louis
Czebrinski, Edward W., St. Louis

D

Daake, John W., St. Louis
Dahms, Gustave, St. Louis
Daley, Frank R., Hamilton
Dalton, Arthur R., St. Louis
Daly, John R., San Diego, Calif. (Member St. Louis County)
Daman, George A., St. Louis
Damron, E. O., Elsberry
Damron, Oscar H., Warrensburg
Danglade, James H., Kansas City
Danis, Peter G., St. Louis
Dann, David S., Kansas City
Darnell, Thomas F. B., Columbia
Davault, Webster W., Delta
Davidson, Morris, Clayton
Davie, Joseph, St. Louis
Davis, C. B., Nevada
Davis, Edgar W., St. Louis
Davis, Frank L., St. Louis
Davis, Harry H., Rolla
Davis, Herbert V., Kansas City
Davis, Irl R., St. Louis
Davis, Jack M., Raytown
Davis, John J., Kansas City
Davis, Kenneth A., Kansas City
Davis, Landis Y., Canton
Davis, Martin W., Webster Groves
Davis, Myron W., St. Louis
Davis, Paul A., Chicago, Ill. (Member South Central County)
Davis, Paul C., Neosho
Davis, Robert C., Kansas City
Davis, Robert I., Birch Tree
Davis, Thos. M., St. Louis
Davis, Wilbur L., Charleston
Dawson, Lerton V., Excelsior Springs
Dawson, Orville L., St. Joseph
Day, Anthony B., St. Louis
Day, Maxwell, Nashville, Tenn. (Member Buchanan County)
Deakin, Rogers, St. Louis
Dean, Francis D., Fayette
Dean, Lee Wallace, Jr., Clayton
Dean, Leslie E., Maryville
DeLamater, Hasbrouck, St. Joseph
de la Torre, John J., Sullivan
Delzell, Wm. A., Springfield
DeMaria, Peter F., Kansas City
Demko, Frank, St. Louis
Demko, William, St. Louis
DeMott, Jack D., Kansas City
DeMotte, John A., Kansas City
Dempsey, D. T., Kennett
Denk, Albert A., St. Louis
Denney, Richard W., Mountain Grove
Dennie, Chas. C., Kansas City
Denny, H. M., Union
Denny, Robert B., University City
Denton, Levi D., Hayti
DePew, Heber B., St. Louis
Deppe, Arthur H., St. Louis
Dernoncourt, John E., Charleston
DeTar, Burleigh E., Joplin
DeTar, B. E., Jr., Joplin
Deutch, Max, St. Louis
Devine, John B., St. Louis
Deweese, Everett R., Kansas City
DeWitt, Robert H., St. Louis
Dickson, Frank D., Kansas City
Dieckman, Wm. C., Dexter
Diehr, Alvin H., St. Louis
Diehr, Maurice A., St. Louis
Diekroeger, Manuel L., Boonville
Dietrich, Karl D., Columbia
Dietz, M. Wendell, Springfield
DiLeo, Senatro W., St. Louis
Dill, Foster A., Maplewood
Dillon, William G., Salem
Dills, Joseph N., Springfield
Dimond, Edgar A., Springfield
Dinelli, Frank E., Poplar Bluff
Diveley, Rexford L., Kansas City
Dixon, John R., Brookfield
Dixon, Otto J., Kansas City
Dixon, Vewiser L., Kansas City
Dlabal, Luke J., Independence
Dmytryk, Eugene T., St. Louis
Doan, Deborah, Bakersfield
Doane, William L., Kansas City
Dobbins, Thomas, Hillsboro
Dodge, Mark, Kansas City
Dodge, Milton, Kansas City
Dodson, William W., Kansas City
Domke, Herbert R., Clayton
Donaldson, J. Earle, Kansas City
Donley, Leo F., Jr., St. Louis
Donley, Robert R., Monett
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Dorris, George T., Illmo
Dorris, Richard P., Jefferson City
Dorsch, Ervin H., Independence
Dorsett, E. Lee, St. Louis
Doubek, John C., St. Louis
Doubek, John C., Jr., Kirkwood (Member Phelps-Crawford-Dent-Pulaski-Maries County)
Douglas, John W., Joplin
Douglas, Thomas H., Jr., Osceola (Member Henry County)
Douglass, Daniel D., Joplin
Douglass, Jesse E., Webb City
Dowd, James F., Jr., St. Louis
Dowell, Donald M., Chillicothe
Dowell, Horace S., Chillicothe
Downey, James W., Kansas City
Doyle, Charles R., St. Louis
Doyle, Joseph P., Washington
Doyle, Raymond E., St. Louis
Drace, Charles C., St. Louis
Drace, Charles C., Jr., St. Louis
Drace, James J., Cape Girardeau
Drake, Avery A., Rolla
Drake, Roy F., Kansas City
Drake, Truman G., St. Louis
Draney, Thomas E., Kansas City
Draney, Thomas L., Kansas City
Drescher, Emmett R., St. Louis
Drews, Leslie C., St. Louis
Drey, Norman W., St. Louis
Dreyer, Carl J., Webster Groves
Dreyer, Philip V., Huntsville
Dripps, Roy C., St. Louis
Drisko, Robert M., Kansas City
Drowns, Bruce V., Kansas City
Drum, Clarence G., St. Louis
Drum, Helen M., Clayton
Duckett, Claude E., Lamar
Duden, Charles W., St. Louis
Duemler, John H., St. Louis
Duemler, Thos. B., Seneca
Duer, Mildred C., Kansas City
Duffy, Edgar A., Trenton
Duffy, Oliver F., Trenton
Duggan, John J., Jr., St. Louis
Dulick, Michael, Brentwood
DuMont, Clement C., St. Joseph
Dunaway, Howard A., Sikeston
Duncan, Ralph E., Kansas City
Duncan, Robert D., Springfield
Duncan, William H., Kansas City
Dunham, R. H., North Kansas City
Dunmire, George Q., Kennett
Durham, Silas L., Dearborn
Durst, Henry, Caraway, Ark. (Member Callaway County)
Dworkin, Saul, St. Louis
Dwyer, Frank X., Kansas City
Dwyer, Hugh L., Kansas City
Dwyer, Reinhardt D., North Kansas City
Dwyer, Thomas L., Mexico
Dyer, Dallas J., St. Louis
Dyer, David P., Sedalia
Dyer, John H., Warrenton

E

Eades, Dee W., St. Louis
Earp, Ralph K., St. Louis
Eastwood, Douglas W., St. Louis
Eber, Carl T., St. Louis
Eberle, John P., Randolph A.F.B., Texas (Member St. Louis Medical Society)
Eberle, Vincent L., St. Louis
Echterhoff, Harry R., St. Louis
Eck, Birkle, St. Louis

Eck, Peter A., St. Louis
Ecker, Decider, Pacific
Eckert, Charles L., St. Louis
Eckert, Clarence T., St. Louis
Ecklund, Archibald M., San Francisco, Calif.
(Member St. Louis Medical Society)
Ector, Henry J., Mexico
Edde, Clifford G., Kansas City
Edele, Eugene H., St. Louis
Edgerton, Winfield D., Address Unknown
(Member St. Louis Medical Society)
Edmonds, Devilla D., Kansas City
Edmondson, Charles T., Malden
Edmondson, Paul J., Centralia
Edwards, D. R., Sedalia
Edwards, Francis L., Monett
Edwards, Joseph C., St. Louis
Edwards, T. Burton, Cedar Hill
Edwards, Theodore F., North Kansas City
Edwards, Waldo B., Cedar Hill
Efron, Joseph, Rock Hill
Eggleston, D. E., Macon
Egley, Loren E., Kirkwood
Eidelman, Jack R., St. Louis
Eidmann, Walter P., St. Louis
Eigel, Edwin G., St. Louis
Eimer, Chas. E., St. Louis
Eisele, Wm. M., New York, N. Y.
(Member St. Louis Medical Society)
Eiseman, Ben, St. Louis
Eisenmann, Benj. P., New Haven
Eklund, Alfred W., Pleasant Hill
Elam, James O., St. Louis
Elders, Frank A., Jr., Cuba
Eldridge, Charles J., Kansas City
Eliscu, Fred, St. Joseph
Eliscu, Juliette, Joplin
Elkins, Ronald F., Springfield
Eller, Byron H., Bangkok, Thailand
(Member Ozarks County)
Ellersieck, Dorothy M., St. Louis
Ellery, William L., LaGrange
Ellett, William H., Appleton City
Elliott, B. Landis, Kansas City
Elliott, Gladden V., St. Louis
Elliott, James R., Kansas City
Elliott, John R., St. Joseph
Elliott, Raymond G., Mission, Kansas
(Member Jackson County)
Ellis, Burnett E., Gideon
Ellis, Calvin C., University City
Ellis, Colburn H., Garden City
Ellis, Elizabeth H., North Little Rock, Ark.
(Member Butler-Ripley-Wayne County)
Ellis, Francis J., Springfield
Ellis, Ralph V., Little Rock, Arkansas
(Member Butler-Ripley-Wayne County)
Ellis, Sam T., Hannibal
(Member St. Louis Medical Society)
Ellis, Wm. W., Marceline
Ellison, Leroy E., Maplewood
Elman, Robert, St. Louis
Elmer, Warren P., St. Louis
Elrod, Dennis B., Cape Girardeau
Elson, Julius, Ladue
Elston, George B., Kansas City
Emerson, Reynolds L., St. Louis
Emmert, Fred, St. Louis
Engel, Lawrence P., Kansas City
Engelhardt, Robert C., Poplar Bluff
English, Milton T., Jr., Kirksville
English, Wallace D., Cardwell
Engman, Martin F., St. Louis
Engman, Martin F., Jr., St. Louis
Enloe, L. David, Jefferson City
Epp, George J., St. Louis
Epps, Curtis, Springfield
Erlanger, Joseph, St. Louis
Erni, Harry E., Macon
Ernst, Edwin C., St. Louis
Ernst, Edwin C., Jr., St. Louis
Ernst, Roland P., St. Louis
Esch, John G., Republic
Eskeles, Irwin H., St. Louis
Esker, George, St. Louis
Esslinger, Arthur T., St. Louis
Estes, Albert M., Cape Girardeau
Etheredge, Maude Lee, Columbia
Eto, Jackson, St. Louis
Etzenhouser, Russell D., Jr., Independence
Eubank, Dillard M., Raytown
Eubank, William R., Kansas City
Evans, Albert L., Bonne Terre
Evans, E. J. E., St. Louis
(Member Jackson County)
Evans, Ezra L., Springfield
Evans, Ezra L., Jr., Springfield
Evans, Fred L., Castro Valley, Calif.
(Member St. Louis Medical Society)
Evans, Harry T., Branson
Evans, John C., St. Louis
Everist, Guy W., Rolla
Eversoll, Norton J., St. Louis
Ewert, J. O., Sedalia
Exon, C. Stuart, Jefferson City
Eyermann, Chas. H., St. Louis

F

Falk, O. P. J., Clayton
Fallet, Chas. E., DeSoto
Farley, Claude C., Kansas City
Farley, Wm. M., St. Louis
Farney, Jacob P., Kansas City
Farnsworth, Jesse J., Kansas City
Farr, A. L., St. Louis
Farrar, C. B., Flat River
Farrar, John T., West Newton, Mass.
(Member St. Louis Medical Society)
Farrell, Robert J., St. Louis
Farris, H. G., St. Louis
Farris, Wm. Walker, St. Louis
Farthing, Fred R., Springfield
Farthing, Gene W., Springfield
Farthing, Robert R., Ozark
Feierabend, Frank L., Kansas City
Feind, Earl E., Rolla
Feinstein, Leon A., St. Louis
Feist, Geo. V., Kansas City
Feldaker, Mauri, Rochester, Minn.
(Member St. Louis Medical Society)
Feldman, David, San Francisco, Calif.
(Member St. Louis Medical Society)
Feller, C. E., Springfield
Feller, Harold H., St. Louis
Fellhauer, Carl M., St. Louis
Fellows, William W., Albany, N. Y.
(Member Chariton-Macon-Monroe-Randolph County)
Feltz, L. W., Perryville
Ferguson, Donald S., Kansas City
Ferguson, Eugene H., Kansas City
Ferguson, James T., Kansas City
Ferguson, John P., Jr., Springfield
Ferguson, L. H., Monett
Ferguson, L. H., Jr., Alexandria, La.
(Member Ozarks County)
Ferguson, Luther J., St. Joseph
Ferguson, Ralph L., Joplin
Ferguson, Robert M., Webb City
Ferguson, Wilson J., Sikeston
Ferrara, John P., St. Louis
Ferrell, Thomas E., Jr., Springfield
Ferris, Carl R., Kansas City
Fessenden, Ersel M., Springfield
Fijan, Kenneth J., Lincoln, Nebr.
(Member St. Louis Medical Society)
Findley, James W., Kansas City
Fineberg, Maxwell, St. Louis
Fingert, H. H., St. Louis
Finkel, Barney W., St. Louis
Finley, Freeman L., Overland
Finnegan, Frank R., St. Louis
Finnegan, Joseph V., St. Louis
Finney, Wm. O., Chaffee
Fischer, Erich, St. Louis
Fischer, Harry W., St. Louis
Fischer, Theodore, Altenburg
Fish, Virgil O., St. Louis
Fisher, Arthur O., St. Louis
Fisher, Edward H., North Kansas City
Fisher, George E., Lebanon
Fisher, Joseph L., St. Joseph
Fitch, C. H. Max, Springfield
FitzGerald, Leo P., University City
Fitzgerald, Robert H., Kansas City
Flader, Otto F., St. Louis
Flance, Israel J., St. Louis
Flanders, Horace F., Kansas City
Flatley, John A., Kansas City
Flavan, David B., St. Louis
Fleishman, Alfred, St. Louis
Fleming, Jacob W., Jr., Moberly
Fleming, Royall B., Kansas City
Fleming, Thomas S., Moberly
Fletcher, Paul F., St. Louis
Fletes, James W., Normandy
Flotte, Bernard H., St. Louis
Flynn, Edward P., St. Louis
Flynn, George W., St. Louis
Flynn, John T., St. Louis
Flynn, Joseph E., St. Louis
Focht, Ralph H., Strafford
Fonda, James W., Poplar Bluff
Forbes, Kenneth A., San Francisco, Calif.
(Member St. Louis Medical Society)
Ford, Lee T., Jr., St. Louis
Ford, Walter W., Gordonville
Fordyce, Claude P., St. Joseph
Forgrave, John R., St. Joseph
Forgrave, Leon P., St. Joseph
Forman, George W., St. Joseph
Forman, Louis H., Kansas City
Forsen, James A., St. Louis
Forsman, Waldo W., Jr., Sappington
Forster, A. F., Seattle, Wash.
(Member St. Louis Medical Society)
Forster, Armand C., St. Louis
Forsythe, Robert W., Kansas City
Forti, John J., St. Louis
Foster, Howard M., St. Louis
Foster, Jack L., Desloge
Foster, Leon, St. Louis
Foster, Robert L., St. Louis
Fowler, I. Charles, North Kansas City
Fowler, J. Henry, Fulton
Fowler, James W., Edwards, Calif.
(Member Jackson County)
Fox, Leon J., St. Louis
Fox, Robert E., St. Louis
Frame, Homer G., Mountain Grove
Francka, W. F., Hannibal
Frank, Adolph M., St. Louis
Frankel, Sol I., St. Louis
Frankenthal, Maurice A., St. Louis
Frankl, George, Kansas City
Franklin, Harold A., St. Louis
Franklin, Max S., St. Louis
Fredeen, Robert C., Kansas City
Freedman, Harold, St. Louis
Freedman, Ruth S., St. Louis
Freeman, David M., St. Louis
Freeman, Hal E., Springfield
Freeman, Spencer L., Kirksville
Freiheit, Harold J., St. Louis
Freimuth, L. E., St. Louis
Frerking, Herbert W., St. Louis
Freund, Newton M., St. Louis
Freund, Samuel J., St. Louis
Frick, John P., Kansas City
Friedman, Bernard, Koch
Friedman, Morris L., Kansas City
Fries, Armand D., St. Louis
Fries, John W., St. Louis
Fries, Wm. A., St. Louis
Friskel, Arthur K., St. Louis
Fritsch, Kilian F., East St. Louis, Ill.
(Member St. Louis Medical Society)
Fritschel, Godfrey C., St. Louis
Froelich, Edwin J., St. Louis
Froelich, Rae W., Lebanon
Fryer, Minot P., St. Louis
Fuchs, George J., Overland
Fuerth, A. L., Cape Girardeau
Fuhrman, Donald L., Kansas City
Fulbright, James H., Springfield
Fulkerson, Wilbur E., Higginsville
Fulks, Richard B., California
Fuller, Charles D., Norton, Va.
(Member Buchanan County)
Funsch, Edwin C., St. Louis
Funsch, Robert E., Shelbyville, Ind.
(Member St. Louis Medical Society)
Furlow, Leonard T., St. Louis
Fuson, Levi H., St. Joseph
Fuson, William A., Trenton

G

Gaebe, Harold C., Desloge
Gafney, George T., Clayton
Gaines, John F., Oklahoma City, Okla.
(Member St. Louis Medical Society)
Gaines, Quentin McD., Kirkwood
Gainey, Harold L., Kansas City
Gale, Frank W., Bismarck
Gale, Joseph F., Chillicothe
Gale, Philip R., St. Louis
Galeno, William A., Vallejo, Calif.
(Member St. Louis Medical Society)
Gallagher, Donald M., Mill Valley, Calif.
(Member St. Louis County)
Gallagher, John F., St. Louis
Gallagher, William J., St. Louis
Ganley, William C., Kansas City
Gansloser, Maximilian W., St. Louis
Gansloser, Wilbert M., Clayton
Gantt, Ernest S., Jr., Mexico
Garcia, Charles L., Mexico
Gard, Raymond F., Independence
Gardner, Joseph W., Glasgow
Garner, Lynn M., Jefferson City
Garrett, Glen H., Columbia
Garrison, Roy F., Kansas City
Gaskins, John H., Kansas City
Gaston, Ralph E., Richmond Heights
Gaunt, Frank P., Webster Groves
Gay, Elmer E., Richmond
Gay, George, Ironton
Gay, Lee Pettit, St. Louis
Gearhart, M., Bethany
Gebert, Clara M., Valley Park
Gempel, Paul A., Kansas City
Gentry, Enoch N., Jr., Kansas City
Gentry, Marvin C., Ava
Gentry, Merritt L., Springfield
Geraughty, Edward, Kansas City

Gernstetter, Sangwill L., Poplar Bluff
Gerst, Aloysius C., Long Beach, Calif. (Member St. Louis Medical Society)
Gerwig, H. Eugene, Downing
Gerwitz, Bernard W., St. Louis
Gestring, Hugh A., Kansas City
Getelson, Joseph, Kansas City
Gibson, David M., Kansas City
Gibson, Helen F., St. Louis
Gibstine, Marvin H., St. Louis
Gildea, Edwin F., St. Louis
Gildea, Margaret C. L., St. Louis
Gilkey, Harry M., Kansas City
Gillespie, William J., Richmond Heights
Gillham, Frank W., Jefferson City
Gilliland, Oliver S., Kansas City
Gillmor, Charles S., Kansas City
Ginsberg, A. Morris, Kansas City
Ginsberg, Norman A., Kansas City
Gish, Rutledge, Fulton
Gissy, Charles J., St. Louis
Gist, William L., Kansas City
Gist, William W., Kansas City
Gitt, Joseph J., Richmond Heights
Glasco, Loren A., Urbana
Glaser, Martin J., St. Louis
Glassberg, Bertrand Y., St. Louis
Glasscock, Ernest L., Kansas City
Glenn, David H., Warsaw
Glenn, Elmer E., Springfield
Glenn, Joseph E., St. Louis
Glennon, William P., St. Louis
Glick, Harry N., St. Louis
Glotfelty, Henry W., Richmond, Va. (Member Callaway County)
Glover, Kenneth, Mt. Vernon
Glynn, Robert, Springfield
Gnade, Albert J., St. Louis
Goebel, Joan M., Clayton
Goldberg, Isadore E., Braymer
Goldenson, Max J., St. Louis
Goldfarb, Alvin, St. Louis
Goldman, Alfred, St. Louis
Goldman, Hyman J., St. Louis
Goldman, Max, Kansas City
Goldman, Melvin L., St. Louis
Goldman, Stanley L., Kansas City
Gollub, Samuel W., St. Louis
Gonser, Karl B., Sedalia
Good, James T., Springfield
Goodman, J. N., Glendale
Goodman, LeRoy, Kansas City
Goodman, Nathaniel, St. Louis
Goodrich, Harold A., Webster Groves
Goodrich, Howard B., Winter Park, Fla. (Member Marion-Ralls-Shelby County)
Goodson, William H., Liberty
Goodson, William H., Jr., Kansas City
Gootee, Thomas H., St. Louis
Gorelick, David F., Springfield
Gorla, Wayne O., St. Louis
Gose, Don Ferrell, Springfield
Gottlieb, Leo, St. Louis
Gottschalk, Helen C., Bethesda, Md. (Member St. Louis Medical Society)
Gowen, Leo F., St. Louis
Grabske, Charles F., Independence
Grace, Charles M., Chillicothe
Gradwohl, Rutherford B. H., St. Louis
Graeser, Richard G., Kirkwood
Graham, Evarts, A., St. Louis
Graham, James W., Kansas City
Graham, Wallace H., Kansas City
Graneto, Joseph A., St. Louis
Grant, Claude S., St. Joseph
Grant, Samuel B., St. Louis
Grantham, Samuel A., Jr., Joplin
Grauerholz, James W., Kansas City
Graul, Elmer G., St. Louis
Graul, Walter P., Ferguson
Graves, Arthur J., Mt. Vernon
Gray, Walter C., St. Louis
Grayson, Richard R., Perryville
Greaves, Eli A., Kansas City
Grebel, Clement B., St. Louis
Greditzer, Arthur S., St. Louis
Green, Jess D., Jr., Raytown
Green, John R., Independence
Green, John Richard, Kansas City
Green, Manuel E., St. Louis
Green, Robert S., Kennett
Green, Stanley L., Independence
Greenberg, Charles, St. Joseph
Greene, Harry L., Hannibal
Greene, Luther D., Richmond
Greene, Maurice L., St. Charles
Greene, W. Wallace, Kansas City
Gregory, Jack A., Jr., Laredo A.F.B., Texas (Member St. Louis County)
Greiner, Theodore, St. Louis
Griffin, Evelyn, Buffalo
Griffin, Olin A., Jr., Buffalo
Griffith, George W., Kansas City
Griffith, Harry M., Camdenton
Griffith, John A., Jr., Kansas City
Grim, George E., Kirksville
Grimes, M. E., St. Joseph
Grindon, Joseph B., Jr., St. Louis
Griot, Albert J., St. Louis
Groce, Nathan W., Address Unknown (Member Grand River Medical Society)
Grody, Marvin H., St. Louis
Grogan, Frank M., St. Louis
Gronau, Axel R., St. Louis
Groom, Horace E., Richmond Heights
Gross, Joseph L., St. Louis
Grosskreutz, Joseph A., St. Louis
Grossman, Marvin, Fredericktown
Grove, G. W., Knob Noster
Growdon, John A., Kansas City
Grueb, Paul M., St. Louis
Gruenfeld, Gerhard E., St. Louis
Grundmann, William H., St. Louis
Guccione, Joseph B., St. Louis
Guffey, Don Carlos, Kansas City
Guhleman, Henry V., Jr., Jefferson City
Guldner, Edmond, Lamar
Gulick, Charles R., St. Louis
Gum, William R., St. Louis
Gummels, Belmont B., St. Louis
Gundlach, Arthur, St. Louis
Gunn, Aubrey J., Versailles
Gunn, Jack, Versailles
Gunn, Richard W., Kansas City
Gunn, Walter T., St. Louis
Gurnee, Landon H., Jefferson City
Gzell, Ronald, St. Louis

H

Hackmeyer, Rubin, St. Louis
Haddock, James N., St. Louis
Haffner, Heinz, St. Louis
Hagebusch, Omer E., St. Louis
Hageman, Paul O., St. Louis
Hager, Victor K., St. Louis
Haggen, Margaret, Kansas City
Haight, John M., Kansas City
Hale, Ralph, Mission, Kansas (Member Jackson County)
Hale, Tyre, H., St. Louis
Haley, Jack A., Kansas City
Haley, Roy R., Brookfield
Hall, Andy, Jr., St. Louis
Hall, Durward G., Springfield
Hall, Eugene W., Ferguson
Hall, Frank W., Cape Girardeau
Hall, James R., Kansas City
Hall, John, Ashland
Hall, Lee, St. Louis
Hall, Marvin F., Joplin
Hall, Preston C., St. Louis
Hall, Robert A., St. Louis
Hall, Robert G., Nevada (Member Callaway County)
Hall, Thomas B., Kansas City
Hall, Willis, St. Louis
Hallberg, John W., Kansas City
Halperin, Phillip H., Kansas City
Halpern, Lawrence K., St. Louis
Hamel, Herbert A., Kansas City
Hamilton, Caldwell K., St. Louis
Hamilton, Eugene G., St. Louis
Hamilton, Eugene H., Joplin
Hamilton Hugh G., Kansas City
Hamilton, William P., St. Louis
Hamlin, Wyeth, Palmyra
Hammler, Christiana V., St. James
Hammond, John J., St. Louis
Hampton, Oscar P., Jr., St. Louis
Hampton, Stanley F., St. Louis
Hamtil, Edward W., St. Louis
Hanan, Ernest B., Springfield
Handler, Eric, St. Joseph
Handler, Fred P., San Francisco, Calif. (Member St. Louis County)
Hanford, Charles W., Camp Carson, Colo. (Member St. Louis Medical Society)
Hanford, Wesley W., St. Louis
Hankin, Norman M., St. Louis
Hanks, Ralf, Fulton
Hanlon, C. Rollins, St. Louis
Hanlon, Thomas J., Muskogee, Okla. (Member St. Louis County)
Hans, Willard J., St. Louis
Hansbro, Gerald L., San Francisco, Calif. (Member Greene County)
Hansel, French K., St. Louis
Hansen, Arthur L., Butler
Hansen, Walter J., St. Joseph
Hanser, Otto C., St. Louis
Hanser, S. Albert, St. Louis
Hanser, Theo. H., St. Louis
Hanss, Armand W., Springfield
Hardacre, Ruth Anna, Kansas City
Hardegree, Harvey, Louisville, Ky. (Member Clay County)
Hardesty, Joel W., Hannibal
Hardesty, John F., St. Louis
Hardin, Thomas L., St. Charles
Hardwicke, Henry, Address Unknown (Member Boone County)
Hardy, Guerdan, Clayton
Hardy, John W., Sumner
Hardy, Joseph A., Jr., St. Louis
Harell, Alex, St. Louis
Harkins, Wm. B., St. Louis
Harkness, Harry, Warrensburg
Harland, R. E., Ironton
Harless, Morris S., Kansas City
Harmann, Martin F., St. Louis
Harms, Florian L., Salisbury
Harned, Bert W., New York, N. Y. (Member Jackson County)
Harrell, Henry J., Morrisville
Harrell, Roosevelt E., Lebanon
Harris, Charles W., St. Louis
Harris, Downey L., St. Louis
Harris, Harold S., Troy
Harris, Hinman A., University City (Member Semo County)
Harris, Irwin J., St. Louis
Harris, Russell D., Oklahoma City, Okla. (Member Jasper County)
Harris, Solon P., St. Louis
Harris, Thomas S., Denver, Colo. (Member Greene County)
Harrison, J. Frank, Mexico
Harrison, Lee B., St. Louis
Harrison, Stanley L., St. Louis
Hart, Martin M., Salem
Hart, Pearl V., Coatsville
Hart, William W., Kansas City
Hartigan, Frank X., St. Joseph
Harting, Hugh R., Sacramento, Calif. (Member St. Louis Medical Society)
Hartman, Howard E., St. Louis
Hartman, Paul T., St. Louis
Hartmann, Alexis F., St. Louis
Hartnett, Dalton C., St. Louis
Hartnett, Leo J., St. Louis
Hartwell, Basil O., Drexel
Hartwig, John A., St. Louis
Harvey, Alexander E., Kankakee, Ill. (Member St. Louis County)
Harwell, James L., Poplar Bluff
Harwell, J. Lester, Poplar Bluff
Hashinger, Edw. H., Kansas City
Haskell, Ralph E., Norborne
Haskins, Arthur L., St. Louis
Hassett, Henry A., St. Louis
Hatcher, Dock T., Jr., Butler
Haw, Marvin T., Jr., Bonne Terre
Hawk, Bray O., St. Louis
Hawker, William D., St. Louis
Hawkins, Geo. L., Jr., St. Louis
Hawkins, George W., Salisbury
Hayden, Loyola F., St. Louis
Haynes, Lee, Kansas City
Haynes, Pugh, Jr., St. Louis
Haynes, Robert C., Jr., Belmont, Mass. (Member Saline County)
Haynes, Robert Clark, Marshall
Haynes, Solon E., Kansas City
Hazen, Robert M., Kansas City
H'Doubler, Francis T., Springfield
H'Doubler, Francis T., Jr., Springfield
Healey, Robert J., St. Louis
Heaney, Robert P., St. Louis
Hearst, Allen L., Kansas City
Heid, Lloyd L., St. Louis
Heideman, Alvah G., St. Louis
Heideman, Milo L., St. Louis
Heifetz, Carl J., St. Louis
Heilbrunn, Max, Lockwood
Heimburger, Leroy F., Springfield
Heinbecker, Peter, St. Louis
Heinemann, Sol, St. Louis
Helbing, Edward J., St. Louis
Helbing, Harry H., St. Louis
Heller, B. Marcus, Kansas City
Hellweg, Charles E., Mt. Vernon
Helm, James O., New Florence
Helman, Richard G., Kansas City
Henderlite, John W., St. Louis
Hendin, Aaron, University City
Hendren, Glenn W., Liberty
Hengen, Henry E., Pattonville
Henke, Chas. F., St. Louis
Hennelly, John J., St. Louis
Hennerich, Walter E., St. Louis
Henrickson, H. O., Poplar Bluff
Henrickson, Hardin M., Poplar Bluff
Henrickson, William E., Poplar Bluff
Henry, Clifford E., Kirksville
Henry, Schubert D., Kansas City
Henschel, Eugene V., St. Louis
Hensley, Daniel R., Hayti

Herbert, Charles T., Cape Girardeau
Herbst, Frank, Kansas City
Herdener, Russell L., Grand Island, Nebr. (Member St. Louis Medical Society)
Herman, Allen I., St. Joseph
Herman, Morris, St. Louis
Herrick, Harold C., St. Louis
Herrman, George V., Kansas City
Herron, W. Floyd, Aurora
Hertel, Albert L., St. Louis
Herzog, Gustav G. A., Cuba
Hess, H. Lewis, Kansas City
Hess, Paul D., Kansas City
Hewitt, Walter R., St. Louis
Heyer, Oscar C., St. Louis
Hibbard, Blaine Z., Kansas City
Hickerson, John C., Independence
Hickerson, Wm. H., Independence
Hickey, Robert F., St. Louis
Hicks, Edward A., Troy
Higgins, Robert S., Kansas City
Hildreth, H. Rommel, St. Louis
Hill, Jack H., Kansas City
Hill, Jesse N., Independence
Hill, John J., Eldorado Springs
Hill, Roland, St. Petersburg, Fla. (Member St. Louis Medical Society)
Hillenbrand, H. Melvin, St. Louis
Hines, Arthur A., St. Louis
Hines, Paul, Kansas City
Hink, Frederick W., Kansas City
Hirsch, Albert, Middletown
Hirschler, Arthur E., Jr., Address Unknown (Member St. Louis Medical Society)
Hite, Henry A., Green Ridge
Hobart, Carl A. B., St. Louis
Hobbs, Alonzo G., St. Louis
Hobbs, Clarence L., St. Louis
Hobbs, Earl B., Smithville
Hobbs, John E., St. Louis
Hoctor, Emmett F., Farmington
Hodge, Robert H., North Kansas City
Hodgson, Frank H., Kansas City
Hodgson, Robert B., Kansas City
Hoefer, Walter H. V., St. Louis
Hoelscher, Harold F., Warrenton
Hoeper, Samuel D., Kansas City
Hoerchler, T. J., Shelbina
Hoffman, Jacob S., Kansas City
Hoffmann, Augustin D., St. Louis
Hoffmann, R. Lee, Kansas City
Hofmeister, Rudolph, St. Louis
Hofsommer, Armin C., Webster Groves
Hofstatter, Leopold, St. Louis
Hofstatter, Lilli, St. Louis
Hogan, Daniel F., Kansas City
Hogan, Frank E., Mound City
Hogeboom, George W., Springfield
Hogg, Garrett S., Jr., Cabool
Hogue, Frank S., Kansas City
Holbrook, Walter F., Kansas City
Holden, Raymond F., St. Louis
Holdenried, William E., St. Louis
Holliday, Morgan Lee, Fillmore
Hollingsworth, Ray S., Clinton
Hollo, Vencel W., St. Louis
Hollweg, Kenneth C., Kansas City
Holman, H. Frank, Kansas City
Holman, Jurney H., Unionville
Holmes, David R., Warrensburg
Holmes, Lemuel I., Miller
Holmes, Prince Albert, Mount Vernon
Holscher, Edward C., St. Louis
Holt, Earl P., Jr., St. Louis
Holton, Edward B., Independence
Holtzman, Samuel, Joplin
Homan, J. S., St. Louis
Honich, Nicholas J., St. Louis
Hook, Waller G., Kansas City
Hooker, John H., Clarksville
Hooss, Albert, St. Louis
Hoover, H. Lee, Jr., Springfield
Hope, James L., Lebanon
Hopkins, F. G., Gideon (Member Dunklin County)
Hopkins, Thomas A., St. Louis
Hopkins, Thomas J., Sedalia
Hopkins, Thomas S., Kansas City
Hopson, George, Liberal, Kansas (Member Marion-Ralls-Shelby County)
Hornback, Edward R., Joplin
Hornback, George A., Hannibal
Horner, John L., St. Louis
Horst, Otto C., Springfield
Horton, James D., Springfield
Horton, Ray B., North Kansas City
Horwitz, Irwin B., St. Louis
Hosto, Leland E., St. Louis
Houck, Russell M., Richmond, Virginia (Member Clay County)
Houston, Vincent T., St. Louis
Howard, John C., Jr., Kansas City
Howard, Walter M., Joplin
Howden, Thomas L., St. Joseph
Howe, Louis F., St. Louis
Hoxie, George H., Berkeley, Calif. (Member Jackson County)
Hrdlicka, Victor E., St. Louis
Huber, Erwin T., St. Louis
Huber, Lasley E., Moberly
Huber, Melvin J., St. Louis
Huck, Frank F., Fenton
Huck, Richard F., Jr., Columbus, Ohio (Member St. Louis Medical Society)
Huckstep, Robert A., Ft. Worth Texas (Member St. Louis Medical Society)
Hudson, G. R., Kirksville
Huelsmann, Donald, Boonville
Huffman, Elston R., Denver, Colo. (Member Greene County)
Huggins, Albert M., St. Louis
Hughes, Clarence O., Ferguson
Hughes, Edgar O., Dixon
Hughes, Gerald E., Kansas City
Hughes, Judson M., St. Joseph
Hughes, Robert G., Creve Coeur
Hughes, Shelby B., Clinton
Hulbert, Bernard, St. Louis
Hull, Walter S., Faucett
Humberd, Charles D., Barnard
Hummel, Anton J., St. Louis
Humphrey, Henry M., Brashear
Humphreys, Edw. T., Boonville
Hungate, Carroll P., Kansas City
Hunt, Claude J., Kansas City
Hunt, John W., Jr., Leadwood
Hunt, Lloyd H., Salem
Hunt, W. J., St. Joseph
Hunter, Fred M., Bowling Green
Hunter, James R., Fulton
Hunter, Martin P., Kansas City
Hurford, Phelps G., St. Louis
Hurst, Ben B., Lebanon
Hurst, W. W., Joplin
Hurwitt, Frank, Kansas City
Husted, George W., Parma
Hutchinson, James H., Jr., St. Louis
Hutto, A. Herman, St. Louis
Hutton, Joseph L., St. Louis
Hux, Wm. J., Essex
Hyatt, William T., St. Louis
Hyman, Anna, St. Louis
Hyndman, Chas. E., St. Louis

I

Ibach, Harold F., Wadsworth, Kansas (Member Jackson County)
Ide, Lucien W., St. Joseph
Imes, Clifford H., Miller
Imes, Elvin D., Maryville
Ingham, Walton C., Kansas City
Inkley, John J., St. Louis
Irick, Carl C., Webster Groves
Irland, Robert D., Kansas City
Irwig, Fred, Kansas City
Irwin, William F., Leasburg
Isbell, Charles H., Carthage
Israel, Milton R., St. Louis
Ittner, George W., Jr., St. Louis

J

Jackson, William R., Kansas City
Jackson, William R., Maryville
Jacob, Walter, Kansas City
Jacobs, Charles C., St. Louis
Jacobs, Frederick A., St. Louis
Jacobs, Morton, Kansas City
Jaeger, Joseph N., Jackson
Jaime, Nicholas, Kansas City
James, Edward D., Joplin
James, Joseph D., Springfield
James, Norman A., St. Louis
James, Otis E., Jr., Kansas City
James, Robert M., Joplin
James, William M., St. Louis
Janis, Lee Davidson, Kansas City
Janney, James G., Jr., Clayton
Jansen, Richard W., Kirkwood
Jansen, Robert, Kansas City
Jarvis, James A., Kansas City
Jaudon, Joseph C., St. Louis
Javaux, Everett J., St. Louis
Jean, J. Ted, St. Louis
Jeans, V., Joplin
Jeffries, Robert C., Kansas City
Jenkins, Joseph M., St. Charles
Jenkins, Paul A., Lebanon
Jennett, Harry N., Kansas City
Jennett, James H., Kansas City
Jennings, Ethlyn C., Parkville
Jennings, Perry W., Canton
Jennings, Robert J., Windsor
Jennison, Maurice H., Des Moines, Iowa (Member Jackson County)
Jensen, J. Ernest, St. Louis
Jensen, Julius, St. Louis
Jesgar, William, St. Louis
Johnson, C. Lawrence, Kansas City
Johnson, Charles H., St. Louis
Johnson, Charles S., Warrensburg
Johnson, Edgar W., Kansas City
Johnson, Edgar W., Jr., Kansas City
Johnson, Edward M., Macon
Johnson, Ferrell H., Lebanon
Johnson, Frank C., Doniphan (Member Butler County)
Johnson, Glenn D., Maysville
Johnson, Grover C., Marthasville
Johnson, John J., Neosho
Johnson, L. G., Springfield
Johnson, M. C., Richmond
Johnson, Mitchell D., Ferguson
Johnson Paul A., Kansas City
Johnson, Q. Ray, Jr., Louisiana
Johnson, Richard E., Columbia
Johnson, Roy, Ferguson
Johnson, Thomas M., Kansas City
Johnson, Warford B., Springfield
Johnson, Wm. A., Kansas City
Johnson, William F., Springfield
Johnston, Joseph L., Springfield
Johnstone, John, Jr., St. Louis
Johnstone, Paul N., Kansas City
Jolley, J. Frank, Mexico
Jolly, Benjamin N., St. Louis
Jolly, William H., St. Louis
Jones, Andrew B., St. Louis
Jones, Augustin, St. Louis
Jones, Dorothy J., Clayton
Jones, Edward E., Lilbourn
Jones, Edward S., Harrisonville
Jones, Garnett, St. Clair (Member St. Louis County)
Jones, George H., Kansas City
Jones, Grey, St. Louis
Jones, James B., Brentwood
Jones, John B., Kirksville
Jones, Kneeland P., Kansas City
Jones, Otey S., St. Louis
Jones, Paul L., Flat River
Jones, Ralph H., Sweet Springs
Jones, Richard A., St. Louis
Jones, Theodore R., Kansas City
Jones, Vincent L., St. Louis
Jones, William E., St. Louis
Jordan, Edward J., St. Louis
Jordan, Ray B., Windsor
Jordan, Walter R., St. Louis
Jorstad, Louis H., St. Louis
Joseph, Donald J., Ft. Sam Houston, Tex. (Member St. Louis Medical Society)
Joslyn, Harold L., St. Louis
Jost, Charles A., St. Louis
Jost, William E., St. Louis
Juarez-Reyna, Guillermo, Kansas City
Juden, Alexander G., Cape Girardeau
Judy, Joseph D., Ferguson
Jungk, Carl G. W., St. Louis

K

Kadel, Merle A., Brookfield
Kadull, Paul J., Conception Junction
Kahn, Lawrence, St. Louis
Kaiser, Clarence D., Hayti
Kallenbach, G. P., Mexico
Kampschmidt, August W., Address Unknown (Member Boone County)
Kanagowa, H., Jefferson City
Kane, Clyde E., St., Louis
Kane, R. Emmet, St. Louis
Kantor, Julius M., Kansas City
Kantor, Samuel, Kansas City
Kappesser, Netajean B., St. Louis
Kappesser, Roland C., St. Louis
Kaplan, Albert, Normandy
Karandjeff, A. D., St. Louis
Karl, Michael M., St. Louis
Kaskie, Clifford R., Clayton
Katz, Milton, Kansas City
Katz, Samuel D., St. Louis
Kauffman, Ruth, Versailles
Kaul, Philip G., Kansas City
Kealhofer, George C., Kansas City
Kearney, Elmer F., Oregon
Keating, John U., New Orleans, La. (Member St. Louis Medical Society)
Keeble, Charles B., St. Louis
Keeler, James E., Kansas City
Keeling, Irene C., Kansas City
Keely, Thomas J., Jr., Springfield (Member St. Louis Medical Society)
Keezer, William S., Monroe City, Indiana (Member St. Louis Medical Society)
Keffler, Karl L., St. Louis
Kehoe, J. Joseph, St. Louis

Keim, John H., Cape Girardeau
Keim, John P., St. Louis
Keith, Willis E., Kansas City
Keller, Joseph M., St. Louis
Keller, Louis, St. Louis
Keller, Maurice J., St. Louis
Keller, Niklaus J. A., Jr. Washington, D. C.
(Member St. Louis Medical Society)
Keller, Robert M., Owensville
Kellett, John G., St. Louis
Kelley, Gilbert B., Savannah
Kelley, Isaac D., Jr., St. Louis
Kelley, Ralph R., Savannah
Kelley, Robert W., St. Louis
Kelley, Walter L., Affton
Kelling, Douglas G., Waverly
Kelling, George A., Waverly
Kelling, Jordan, Waverly
Kelly, Charles A., St. Louis
Kelly, Eugene, H., Kansas City
Kelly, Marshall W., Jefferson City
Kelly, R. Emmet, St. Louis
Keltner, Raymond O., Raytown
Kenamore, Bruce, St. Louis
Kendis, Joseph B., St. Louis
Kennedy, Francis L., St. Louis
Kennedy, John L., St. Louis
Kennedy, R. W., Marshall
Kenney, Verna E., Joplin
Kent, Bela K., Kansas City
Kent, Clifford F., Kansas City
Kent, Leonard, North Hollywood, Calif.
(Member St. Louis County)
Kerr, David N., St. Louis
Kerr, Frank T., Monett
Kerr, Russell, Kansas City
Kessler, Joseph J., St. Louis
Ketcham, William M., Kansas City
Ketron, Marvin B., Kansas City
Kettelkamp, George D., St. Louis
Key, J. Albert, St. Louis
Keyes, Edward L., St. Louis
Kibbe, Edgar A., California
Kibbe, John H., Monroe City
(Member Marion-Ralls-Shelby County)
Kieber, R. W., St. Joseph
Kieffer, Roland S., St. Louis
Kiehl, Katharine, Joplin
Kienberger, Paul A., Kansas City
Kiene, Richard H., Kansas City
Kienzle, Edward C., St. Louis
Kilker, Clarence H., St. Louis
Kilker, Donald E., St. Louis
Killion, John J., Portageville
Kilpatrick, Wm. R. J., St. Louis
Kimball, Merritt H., Kansas City
Kimberlin, Herbert C., Trenton
Kimelman, Nathan, St. Louis
Kimes, Ira D., Cameron
Kinder, James A., Cape Girardeau
King, Elbert R., Boise, Idaho
(Member West Central Counties)
King, Eustace E., III, St. Louis
King, Francis C., St. Louis
King, John V., St. Louis
King, Samuel J., St. Louis
Kingsland, Robert C., Clayton
Kinner, Helmuth M., St. Louis
Kinsella, Dalton L., Jr., St. Louis
Kinsella, Edward D., St. Louis
Kinsella, R. A., St. Louis
Kirchner, Walter C. G., St. Louis
Kirk, Charlie W., Hopkins
Kirk, John S., St. Joseph
Kirkpatrick, Milton E., Kansas City
Kirschman, Robert E., Joplin
Kirstein, Melvin B., St. Louis
Kirtz, Louis P., St. Louis
Kister, George E., St. Charles
Kistner, William F., St. Louis
Kitchell, William E., St. Clair
Kitchen, William M., Kansas City
Kiyasu, Robert K., San Francisco, Calif.
(Member St. Louis Medical Society)
Klaff, Daniel D., St. Louis
Klebba, Larry B., Jefferson City
Klein, Andrew G., Newington, Conn.
(Member St. Louis Medical Society)
Klein, Arnold G., St. Louis
Klein, Arthur, Perry Point, Md.
(Member St. Louis Medical Society)
Klein, Bert H., St. Louis
Klein, Edward H., Kansas City
Klein, Harry A., St. Louis
Kleinschmidt, Clinton, St. Louis
Klemme, Roland M., St. Louis
Klenk, Charles L., St. Louis
Klepinger, Dayton P., Kansas City
Klingner, George M., Springfield
Klink, Lon Benjamin, St. Charles
Klippel, Allen P., St. Louis
Klippel, Bernhardt W., St. Louis
Kloecker, Herman J., Overland
Kloeppel, Carl F., Kirkwood
Klym, Nicholas, St. Louis
Knabb, Arthur D., Springfield
Knabb, Harris, Springfield
Knabb, Henry F., Springfield
Knabb, Henry F., Jr., Springfield
Knabb, Kenneth E., Springfield
Knapp, Mark R., Eglin A.F.B., Florida
(Member Chariton-Macon-Monroe-Randolph County)
Knapp, Rudolf, Golden City
Kneal, E. Ellsworth, St. Louis
Kneibert, Fred L., Poplar Bluff
Knepper, P. A., St. Joseph
Knese, Luke A., St. Louis
Knight, Franklin P., St. Louis
Knight, John S., Kansas City
Knight, Lyle B., Lee's Summit
Knight, William A., Minneapolis, Minn.
(Member St. Louis Medical Society)
Knight, William A., Jr., St. Louis
Knoch, H. Kermit, Kansas City
Knoke, Frederick Wm., Jr., St. Louis
Knotts, H. S., St. Louis
(Member Mineral Area County)
Knowles, Harry P., Rockaway Beach
Knowlton, Norman P., Jr., St. Louis
Knox, Andrew C., Kansas City
Knox, Earl R., Kansas City
(Member Clay County)
Koch, Otto W., Clayton
Koch, Robert E., St. Louis
Koehler, Charles A., Kansas City
Koehler, John W., Joplin
Koenig, Frank J., Kansas City
Koenig, George H., St. Petersburg, Fla.
(Member St. Louis Medical Society)
Koenig, Karl F., St. Louis
Koerner, Kenneth A., Clayton
Koessel, Arthur W., St. Louis
Kohler, Eugene J., St. Louis
Kohler, Louis H., St. Louis
Kohn, Cecil M., Kansas City
Kollar, Charles S., Ridgewood, N. J.
(Member Cape Girardeau County)
Konzelmann, John A., St. Louis
Koon, Bernard T., St. Louis
Kopp, Jules, H., St. Louis
Kopp, Leonard J., St. Louis
Koppenbrink, Walter E., Jr., Higginsville
Korn, Robert L., St. Louis
Korth, William M., Kansas City
Kotkis, A. J., Brentwood
Kotner, Irvin A., Fontana, Calif.
(Member St. Louis Medical Society)
Kotner, Lawrence M., St. Louis
Kountz, William B., St. Louis
Kouri, Martin F., St. Louis
Koutsoumpas, William V., St. Louis
Kovitz, Louis, Kansas City
Kowert, Edw. H., St. Louis
Kozal, Francis L., Belle
(Member Phelps-Crawford-Dent-Pulaski-Maries County)
Kraft, Edward O., Brentwood
Kraft, Jacob, Chicago, Ill.
(Member Jackson County)
Kramer, Fred, St. Louis
Kramer, Scott G., Houston
Kramolowsky, Helmuth H., St. Louis
Kranson, Seymour J., Independence
Krause, G. Lynn, St. Louis
Krebs, Joseph M., New York, N. Y.
(Member St. Louis Medical Society)
Krebs, Otto St. Clair, St. Louis
Krieger, John L., St. Louis
Kromer, Charles, St. Louis
Kubitschek, Paul F., St. Louis
Kuebrich, Thomas C., Ferguson
Kuhn, John R., Jr., Joplin
Kulowski, Jacob, St. Joseph
Kuritz, Albert B., North Little Rock, Ark.
(Member St. Louis County)
Kurth, Robert K., St. Louis
Kurtzeborn, Edwin E., Tampa, Fla.
(Member St. Louis Medical Society)
Kurz, Rudolph F., St. Louis
Kuttner, Marianne, St. Louis
Kyger, Fred B., Kansas City
Kyner, Thos. A., Kansas City

L

Lachance, Leopold, Centralia
Lacy, N. Eugene, Kansas City
Ladenson, Roland P., Columbia
LaDriere, Raymond J., St. Louis
Laffoon, France L., Raytown
LaHue, L. D., Butler
Lakaytis, Charles A., Kansas City
Lally, James J., Kansas City
Lam, Robert L., St. Louis
Lamar, Frederick C., Kansas City
Lamar, Robert F., Kansas City
Lamb, Sam E., Portland, Oregon
(Member Howard County)
Lamb, Woodrow M., Hayti
Lambert, Marian, Princeton
Lamke, Charles M., Columbia
Lammert, Thomas K., New Rochelle, N. Y.
(Member St. Louis Medical Society)
Lamson, Roy C., Neosho
Lamy, John E., Sedalia
Landau, Daniel B., Hannibal
Landis, George K., Kansas City
Landree, James C., St. Louis
Lane, Clinton W., St. Louis
Laney, Ronald L., Joplin
Langan, Wm. J., Jr., St. Louis
Lange, Adolph C., St. Louis
Langenbach, Alfred M., St. Louis
Langhus, Melvin O., North Kansas City
Langston, W. R., Springfield
Lanier, Andrew S., Fulton
Lanier, Earl W., St. Louis
Lanier, Patricia F., Fulton
Laning, J. H., Kansas City
Lankford, Harold D., Mexico
Lanning, Richard C., Ste. Genevieve
Lanning, Robert J., Hannibal
Lanning, Robert W., Ste. Genevieve
Lansche, Elmer A., St. Louis
Lanzafame, S. Anthony, Farmington
Lapi, Angelo, Kansas City
Lapi, Ruth M., Kansas City
Lapp, Harry C., Kansas City
Lapp, John G., Kansas City
Larimore, Joseph W., St. Louis
Larsen, Kenneth V., St. Louis
Lassar, Gilbert N., St. Louis
Latham, Kenyon S., California
Latham, Raymond W., Kansas City
Lau, Gustav A., St. Joseph
Laurenzana, Frank P., Kansas City
Lawless, Charles L., Marshall
Lawrence, George H., St. Louis
Lawrence, John R., Marshall
Lawrence, John V., St. Louis
Lawton, John T., San Francisco, Calif.
(Member St. Louis Medical Society)
Lawton, Lawrence W., St. Louis
Lawton, Thos. P., St. Louis
Layton, Ira C., Kansas City
LeBlanc, Leo J., St. Louis
Lecklitner, Myron D., Kansas City
Lederer, Charles M., Warrensburg
Lederman, Joseph, St. Louis
Lee, A. E., Illmo
Lee, Chester E., Kansas City
Lee, Elbert J., Jr., St. Louis
Lee, George C., Kansas City
Lee, Leonard R., Bethany
Leech, Charles A., Columbia
Leech, Maurice P., Fayette
Leeper, Claude K., Columbia
Legner, Stanley G., Perryville
Lehner, Richard L., Kansas City
Leidinger, Karl J., Republic
Leidler, Franz, Webster Groves
Leifer, William W., Kansas City
Leitch, Cecil G., Kansas City
Leitz, Frank B., Kansas City
Lembeck, Joseph A., St. Louis
Lemmon, George B., Springfield
Lemmon, G. Bruce, Jr., Springfield
Lemoine, Albert N., Kansas City
Lenobel, Milton I., St. Louis
Lentz, Harold C,. Neosho
Lenzen, John L., Winter Haven, Fla.
(Member St. Louis Medical Society)
Leonard, Ward H., Tulsa, Okla.
(Member Jackson County)
Lerner, Abe F., Clayton
Leslie, Charles H., Kirkwood
Leslie, James F., Springfield
Leslie, J. Paul, Jefferson City
Leslie, J. T., Jefferson City
Leslie, Walter L., Russellville
Levey, Harry B., Kansas City
Levey, Simon A., St. Louis
Levin, Sidney S., St. Louis
Levine, Ervan L., Vandalia
(Member Marion-Ralls-Shelby County)
Levitan, Morton E., Raymond, Wash.
(Member Webster County)
Levy, Irwin, St. Louis
Lewellen, Charles H., Louisiana
Lewellen, Charles P., Louisiana
Lewin, Wilbur H., St. Louis
Lewis, Andrew L., Sumner
Lewis, Ray B., Boonville
Lewis, Revis C., Kansas City
Lewis, William E., Kansas City
Leydig, Stanley M., St. Louis

Lichtor, Alexander, Kansas City
Lichtor, Joseph M., Kansas City
Licon, Francisco, Winfield
Lieb, Otto, St. Louis
Lieberman, B. Albert, Jr., Kansas City
Liersch, Joseph C., Kansas City
Liese, Grover B., St. Louis
Liggett, Hiram S., St. Louis
Lilly, Terry E., Kansas City
Lilly, Terry E., Jr., Kansas City
Limbaugh, W. R., Fort Myers Beach, Fla. (Member Pemiscot County)
Lindeman, Carl H., St. Louis
Lindquist, Carl N., Kansas City
Lindsay, John W., Conway
Link, Vance E., Independence
Linton, C. S., Kennett
Linville, Howard E., New York, N. Y. (Member Jackson County)
Lipsitz, Ellis S., St. Louis
Lischer, Carl E., St. Louis
Lissack, Edmund, Concordia
Liston, Odus, Oak Grove
Littauer, David, St. Louis
Littmann, Lewis E., Clayton
Litzow, Louis T., St. Louis
Locker, George E., Iantha
Lockhart, Charles E., Springfield
Lockwood, Ira H., Kansas City
Lockwood, W. E., Slater
Loeb, Virgil, St. Louis
Loeffel, Ellen S., St. Louis
Loewy, Louise B., Kansas City
Logan, James A., Warsaw
Lohr, Curtis H., St. Louis
Londe, Sol, St. Louis
Lonergan, Warren M., St. Louis
Long, David S., Harrisonville
Long, Forrest C., Savannah
Long, Frank B., Sedalia
Long, Robert S., Kansas City
Longfield, Fred J., Lathrop
Lonsway, Maurice J., St. Louis
LoPiccolo, Vincent J., St. Louis
Lottes, James O., St. Louis
Loughead, John R., Poplar Bluff
Love, W. S., Nevada
Loving, B. Rush, Ballwin
Lowe, Alvin L., Sedalia
Lowe, Horace A., Springfield
Lowe, Horace A., Jr., Springfield
Lowell, Paul, Kansas City
Lowenstein, Paul S., Clayton
Lowrey, Ford J., Kansas City
Lowry, Henry L., Tindall
Loyd, Earl L., Jefferson City
Lucas, John H., Brookfield
Lucas, William B., Mendon
Lucido, Joseph L., St. Louis
Lucke, Eugene M., Hannibal
Luckenbill, Paul T., Plattsburg
Luckey, Horace L., Maplewood
Luedde, Fullerton W., St. Louis
Luedde, Philip S., St. Louis
Luman, Frank E., Edina
Lund, Herluf G., St. Louis
Lundgren, Fred H., Jr., Kansas City
Luppens, Albert F., Address Unknown (Member Jackson County)
Lurie, Harold H., Springfield
Lusk, Chas. A., Jr., Butler
Luten, Drew W., St. Louis
Luter, Carter W., Butler
Lutkewitte, Joseph F., St. Marys
Lyddon, Harold R., Jr., Kansas City
Lyle, Robert R., Versailles
Lyman, Edward H., St. Louis
Lyman, Harry W., St. Louis
Lynxwiler, Chester P., St. Louis
Lytle, William R., Rolla
Lyttle, G. C., St. Louis
Lytton, William B., Clayton

Mc

McAdam, Charles R., St. Louis
McAdam, James D., Address Unknown (Member Chariton-Macon-Monroe-Randolph County)
McAfee, C. Alan, St. Louis
McAlester, Andrew W., Jr., Kansas City
McAlester, Andrew W., III, Kansas City
McArtor, Thomas R., Browning
McBratney, Emmett W., Tucson, Ariz. (Member St. Louis Medical Society)
McBurney, C. A., Slater
McCall, Edwin L., Brentwood
McCall, William K., Laddonia
McCallum, A. J. C., Aurora
McCann, Louis P., New London (Member Buchanan County)
McCanse, Raymond A., Kansas City
McCarroll, Henry R., St. Louis
McCarthy, Eugene F., St. Louis
McCarthy, Thomas D., Bridgeton
McCarthy, William F., Independence
McCaughan, John M., St. Louis
McClanahan, Robert C., Kansas City
McClure, David N., St. Louis
McClure, Thomas C., Sikeston
McComas, Arthur R., Sturgeon
McConchie, James E., Independence
McCorkle, E. Lee, Horton, Kansas (Member Saline County)
McCormick, James E., North Kansas City
McCoy, Frederick J., Kansas City
McCoy, Warren R., Caruthersville
McCracken, Samuel R., Excelsior Springs
McCraw, Doyle C., Bolivar
McCubbin, Clarence R., Kansas City
McCubbin, J. Burleigh, Fulton
McCullough, Campbell C., Kansas City
McCunniff, William B., Kansas City
McDaniel, John R., St. Joseph
McDonald, Bruce P., Kansas City
McDonald, Eugene F., Jackson
McDonald, George H., St. Louis
McDonald, John J., Belleville, Ill. (Member St. Louis Medical Society)
McDonald, Wilbur P., St. Joseph
McDonnell, John F., Kansas City
McDowell, Frank S., St. Louis
McElroy, Glenn L., Columbia
McElvain, Robert C., St. Louis
McFadden, James F., Clayton
McFadden, James F., Jr., St. Louis
McFarland, M. D., Kansas City
McFarlane, John A., Topeka, Kansas (Member St. Louis Medical Society)
McGahan, John J., Address Unknown (Member St. Louis Medical Society)
McGennis, Patrick, St. Louis
McGinnis, Byron J., St. Louis
McGinnis, William F., St. Louis
McGlothlan, Arthur B., St. Joseph
McGowan, Hugh D., Address Unknown (Member St. Louis County)
McGuire, William A., St. Louis
McHale, Thomas C., Kansas City
McHaney, John W., Jefferson City
McIntire, Emery J., Carthage
McIntire, Landon R., St. Charles
McKaskle, Clarence W., Caruthersville
McKee, Joseph W., Kansas City
McKinstry, Karl V., DeSoto
McKnelly, William V., Jefferson City
McLean, Royal C., Kirkwood
McLelland, Richard I., Address Unknown (Member St. Louis Medical Society)
McLeod, John, Kansas City
McMahon, Alphonse, St. Louis
McMahon, Bernard J., St. Louis
McMillan, Thomas E., Kansas City
McMurray, Herbert C., Wentzville
McNalley, Frank P., St. Louis
McNamara, John J., Overland
McNamee, Owen J., St. Louis
McNamee, William F., Affton
McNearney, Joseph, St. Louis
McNeel, John O., St. Louis
McNeel, Lee A., Jr., Greenfield
McNew, William T., Carthage
McPhee, William R., Corona, Calif. (Member Jackson County)
McPheeters, James W., Poplar Bluff
McPheeters, J. W., Jr., Poplar Bluff
McPherson, Owen P., Kansas City
McPike, Lloyd H., Joplin
McShane, Quentin W., St. Louis
McSwiney, John G., St. Louis
McVay, James R., Kansas City
McVay, James R., Jr., Kansas City

M

Maas, Hermann, St. Louis
Macauley, Bernard J., Poplar Bluff
MacBryde, Cyril M., Kirkwood
Macdonald, William C., St. Louis
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield
MacInnis, Florence E., Kansas City
Mack, Mary L., Joplin
Mack, Robert E., St. Louis
Mackey, John F., Jr., St. Louis
Macko, Joseph R., St. Louis
Maclean, John A., Monrovia, Calif. (Member Jackson County)
Macnish, James M., St. Louis
Macon, William L., Jr., St. Louis
Maddox, Albert R., Sedalia
Maddox, John D., Joplin
Maddux, William P., Springfield
Madison, Waite H., Marshall
Magallon, Dorothy T., St. Louis
Magee, Charles D., St. Louis
Magidson, Joseph, St. Louis
Magness, Guy N., University City
Magness, William C., Branson
Mahe, George A., Clayton
Maher, Robert W., Springfield
Mairs, Edgar J., Trenton
Maizus, Saul H., St. Louis
Major, Hermon S., Kansas City
Malinoski, Mitchell V., Poplar Bluff
Malles, A. Conrad, St. Louis
Malley, John A., Quincy, Ill. (Member Marion-Ralls-Shelby County)
Mandler, George, Chillicothe
Maness, Charles E., Neosho
Manganaro, Frank J., Brentwood
Manion, Peter J., St. Louis
Mannis, Ben G., St. Louis
Mansbacher, Kurt, St. Louis
Mansur, Edward E., Miami, Fla. (Member Cole County)
Manting, George, St. Louis
Mantz, Herbert L., Kansas City
Maples, F. H., Mount Vernon
Marcus, Edward, Springfield
Marcus, Morris D., St. Louis
Markel, Arthur D., Poplar Bluff
Marks, Mark M., Kansas City
Marmor, William A., St. Louis
Marshall, A. H., Charleston
Marshall, Cameron F., Kansas City
Marshall, Homer C., Springfield
Marshall, W. J., Springfield
Marston, Warren G., St. Louis
Martin, Albert J., East Prairie
Martin, Andrew D., Sikeston
Martin, Bruce C., Columbus, Ohio (Member St. Louis Medical Society)
Martin, Charles E., St. Louis
Martin, Forrest L. Nevada
Martin, Frederick W., Jr., St. Louis
Martin, James H., Ironton
Martin, Maynard W., St. Louis
Martin, Raymond T., St. Louis
Martin, Samuel P., East Prairie
Martin, Thomas M., St. Louis
Martin, W. E., Odessa
Marty, L. A., Lakeview Heights (Member Jackson County)
Martz, John C., Webster Groves
Mason, Roy E., St. Louis
Massie, Edward, St. Louis
Masters, William H., St. Louis
Masterson, Melvin L., Richmond
Mastin, E. Vernon, St. Louis
Mathae, George H., St. Louis
Mathewson, Hugh S., Kansas City, Kan. (Member Jackson County)
Matteson, Frank B., Grant City
Matthews, Gilpin L., Beaufort
Matthews, John G., St. Louis
Matthews, John I., Jefferson City
Mattis, Robert D., St. Louis
Maughs, Sydney B., St. Louis
Max, Clarence O. C., St. Louis
Max, Paul F., St. Louis
Maxey, Hugh W., Jefferson City
Maxon, T. Reed, Warrensburg
Maxwell, Richard W., University City
May, Benjamin F., St. Louis
Mayer, John H., Jr., Kansas City
Mayer, Robert A., St. Louis
Mayfield, James L., Washington
Mays, Frank G., Washington
Mazur, Herbert A., St. Louis
Mead, Samuel T., Slater
Mead, Sedgwick, St. Louis
Meador, James R., Clayton
Meagher, Arthur J., Portsmouth, Va. (Member St. Louis County)
Medler, Francis J., St. Louis
McGee, William K., Moberly
Mehan, George T., St. Louis
Meier, F. X., Jefferson City
Meinberg, William H., St. Louis
Meiners, Edwin P., St. Louis
Meiners, Theodore M., Webster Groves
Meinershagen, C. W., Jefferson City
Meinhardt, Ralph E., Joplin
Meisenbach, A. Edward, St. Louis
Melgaard, S. Ross, Kansas City
Melick, William F., St. Louis
Mellies, Eugene G., St. Louis
Mellies, George A., St. Louis
Meluney, S. E., St. Joseph
Mendonsa, Elsa L., University City
Mendonsa, Lawrence E., St. Louis
Merenda, Sam J., St. Louis
Merklin, Anton L., St. Louis
Merritt, Burch A., St. Louis
Merz, Jean J., St. Louis
Metz, Charles O., St. Louis
Meyer, Claude B., Springfield

Meyer, Curtis A., St. Louis
Meyer, Herman M., St. Louis
Meyer, James E., Ballwin
Meyer, Oscar D., St. Louis
Meyer, Paul W., Kansas City
Meyerhardt, Milton H., St. Louis
Meyers, Montague M., Address Unknown (Member St. Louis Medical Society)
Mezera, Raymond A., University City
Michael, Vernon E., St. Louis
Michaelis, B. A., Fredericktown
Michaelree, John F., Maplewood
Mickel, Arthur A., Cassville
Middleman, Isadore C., St. Louis
Mier, Thomas M., St. Louis
Milder, Benjamin, St. Louis
Miles, George O., Kansas City
Miles, Paul W., St. Louis
Miller, Charles W., St. Louis
Miller, Clinton L., Lees Summit
Miller, Clyde S., Waynesville
Miller, D. Herbert, Muskogee, Okla. (Member Chariton-Macon-Monroe-Randolph County)
Miller, Dan Tucker, St. Louis
Miller, Dean M., Platte City
Miller, Eugene A., St. Joseph
Miller, Gerald L., Kansas City
Miller, H. Edward, St. Louis
Miller, Howard S., Macon
Miller, Jack G., St. Joseph
Miller, Leroy J., Columbia
Miller, Oliver J., Cape Girardeau (Member Perry County)
Miller, Perry B., Detroit, Mich. (Member St. Louis Medical Society)
Miller, Wade H., Kansas City
Miller, Walter P., Kansas City
Millikin, Lester A., St. Louis
Mills, Warren B., St. Louis
Milster, Clyde R., St. Louis
Miltenberger, Paul C., Kennett
Miltenberger, Val E., Kirksville
Minton, Robert S., St. Joseph
Minton, William H., St. Joseph
Missey, Wilburn C., Jr., St. Louis
Mistachkin, Norman L., St. Louis
Mitchell, Ernest, Goodman (Member Jasper County)
Mitchell, Robert H., Kansas City
Mitchell, Roy E., Salem (Member St. Louis Medical Society)
Mitchell, Samuel E., Malden
Mixson, William C., Kansas City
Modlin, John J., Columbia
Moeller, Carl E., St. Louis
Moen, Berwyn H., St. Joseph
Moennighoff, Fritz J., Monett
Mohler, Elbert M., Jr., Senath
Molden, Charles A., St. Louis
Molholm, Hans B., St. Louis
Monahan, Elmer P., Kansas City
Monat, Seymour, St. Louis
Monroe, Alfred E., Kansas City (Member Pettis County)
Montani, Charles, St. Louis
Montgomery, James G., Kansas City
Montgomery, John S., Milan
Mooney, Justin L., Kansas City
Mooney, Marcel L., Kansas City
Moore, Harry G., St. Louis
Moore, Neil S., St. Louis
Moore, Robert A., Kansas City
Moore, Robert A., St. Louis
Moore, Sherwood, St. Louis
Moore, Walter L., Clayton
Moore, William A., St. Louis
Moore, William E., Normandy
Morest, F. Stanley, Kansas City
Morfit, John C., Clayton
Morgan, David B., Kansas City
Morley, Louise A., Kansas City
Morrin, Kevin C., St. Louis
Morris, Clyde L., Caruthersville
Morris, Harvey E., St. Louis
Morris, Mary E., St. Louis
Morris, Robert C., Nevada
Morrow, Raymond L., Kansas City
Morroway, James H., St. Joseph
Morse, Marvin, St. Joseph
Morton, Paul C., Springfield
Moskop, Peter G., St. Louis
Moss, Paul, Kansas City
Moss, William T., Columbia
Mott, James R., Hartville
Motzel, Albert J., St. Louis
Mountjoy, Grace S., St. Louis
Mowrey, William O., St. Louis
Moyer, Carl A., St. Louis
Muckerman, Richard I. C., St. Louis
Mudd, J. Gerard, St. Louis
Mudd, James L., St. Louis
Mueller, Charles B., St. Louis
Mueller, Clarence E., St. Louis
Mueller, Joseph A., St. Louis
Mueller, Martin J., Kansas City
Mueller, Morris A., Ladue
Mueller, Ralph E., Kansas City
Mueller, Robert, St. Louis
Mueller, Robert J., St. Louis
Mueller, W. K., St. Louis
Muench, Albert H., St. Joseph
Muench, Ludwig O., Washington
Muenster, Joseph J., Jr., San Francisco, Calif. (Member St. Louis Medical Society)
Muether, Raymond O., St. Louis
Mullarky, Wilbur A., St. Louis
Mullen, Leo M., Kansas City
Mulligan, Leo V., St. Louis
Mullinax, Orr, St. Joseph
Mullins, Bernard L., North Kansas City
Multhauf, Cyril J., Kansas City
Mundy, H. F., St. Joseph
Mundy, William L., Kansas City
Munsch, Augustin P., St. Louis
Munsch, Girard A., St. Louis
Murphy, Bernard L., Hannibal
Murphy, James P., St. Louis
Murphy, Jerome P., Camp Atterbury, Indiana (Member Jackson County)
Murphy, John C., St. Louis
Murphy, John P., St. Louis
Murphy, Paul, St. Louis
Murphy, Robert J., Kansas City
Murray, John W., Houston, Texas (Member Pettis County)
Murray, Lotis V., Pleasant Hill
Murray, Louis F., St. Louis
Muschany, Norman K., Troy
Musgrave, David E., Excelsior Springs
Musgrave, Paul W., Address Unknown (Member Nodaway-Atchison-Gentry-Worth County Medical Society)
Musick, James D., Springfield
Musser, Richard E., Waynesville (Member South Central Counties)
Mutshnick, Clara P., St. Louis
Myers, E. Lee, St. Louis
Myers, James M., Rolla
Myers, John L., Kansas City
Myers, John S., Kansas City
Myers, Ralph R., Bremerton, Wash. (Member Jackson County)
Myers, Robert M., Kansas City
Myers, Roy E., Joplin
Myers, Wilson A., Kansas City

N

Nakada, James R., St. Louis
Napper, Marvin L., Springfield
Naryka, Joseph J., St. Louis
Nash, Helen E., St. Louis
Nash, W. Hampton, St. Louis
Neal, M. Pinson, Columbia
Needels, Orval T., Kansas City
Neff, Robert L., Joplin
Neilson, Arthur W., St. Louis
Neilson, Charles H., St. Louis
Neis, Harry B., Harrisonville
Nelson, Charles S., Kansas City
Nelson, Fred L., Kansas City
Nelson, William, St. Louis
Nemec, Stanley S., St. Louis
Ness, Carl K., St. Joseph
Nester, Charles A., St. Louis
Nester, Gerard A., St. Louis
Netherton, George F., Cameron
Neubeiser, Ben L., St. Charles
Neumann, Roland F., Jr., St. Louis
Neun, W. F., St. Louis
Nevins, Roscoe C., Hermitage (Member South Central Counties)
Newlon, John S., Nevada
Newman, Harold G., St. Louis
Newman, Mary Jane, Cassville
Newman, Percy, St. Louis
Newton, Henry O., La Plata
Nichols, Frank J., Mokane
Nichols, Samuel I., Address Unknown (Member Lincoln-St. Charles County)
Nicholson, Clarence M., St. Petersburg, Fla. (Member St. Louis Medical Society)
Nickson, Charles E., Jr., Independence
Nicolai, Charles H., St. Louis
Nicolay, Kenneth S., Kansas City
Niedermeyer, Edward L., Tarkio
Niedermeyer, F. P., Kansas City
Niederwimer, John, Koch
Nienstedt, Elam J., Sikeston
Niesen, Frank J., St. Louis
Nifong, Frank G., Columbia
Nigro, D. M., Kansas City
Nigro, E. Robert, Kansas City
Nigro, Joseph A., Kansas City
Nisbet, Eliga B., Odessa
Nix, W. K., Marshall
Nixon, Edward E., Gallatin
Noah, Joseph W., St. Louis
Nofles, James W., St. Louis
Nolan, Charles J., St. Louis
Noller, Henry W., St. Louis
Noltensmeyer, Milton N., Kansas City
Norman, Robert M., Ava
North, William R., Address Unknown (Member St. Louis County)
Northup, Glenn R., St. Louis
Norton, Harry B., Hannibal
Norton, William H., St. Louis
Novota, Otto J., Smithville
Nuetzel, John A., St. Louis
Nulton, Ida May, Lancaster
Nunn, Pat Morris, Kansas City, Kans. (Member Jackson County)
Nussbaum, Paul B., Cape Girardeau
Nussbaum, Robert A., St. Louis
Nye, Robert S., St. Louis

O

Obermeyer, Charles G., St. Louis
O'Brien, Edward C., Shreveport, La. (Member St. Louis Medical Society)
O'Brien, Harry F., Mexico
O'Brien, James A., Rogers, Ark. (Member Greene County)
O'Brien, Leo A., Kansas City
O'Brien, Raymond W., Kansas City
O'Brien, Robert M., St. Louis
Obrock, Louis C., St. Louis
Ockerblad, Nelse F., Kansas City
O'Connell, Frank A., Kansas City
O'Connell, John, St. Louis
O'Connell, P. J., Kansas City
O'Connor, Wm. B., St. Joseph
Odell, Richard T., St. Louis
O'Dell, Timothy T., Ellington (Member West Central Counties)
O'Donoghue, James, St. Joseph
O'Dowd, James A., St. Louis
Oehler, William F., Cape Girardeau
Ogilvie, John H., Kansas City
Oglevie, Rial R., Kansas City
Ogura, Joseph H., Brentwood
Ohmoto, Masao, St. Louis
O'Keefe, C. D., St. Louis
Old, Jacob W., Jr., Houston, Texas (Member Jasper County)
O'Leary, James L., St. Louis
Olmsted, William H., St. Louis
Olson, Erwin T., Brookfield
O'Malley, Eugene J., St. Louis
O'Malley, James F., Kansas City
O'Neil, James H., Kansas City
O'Neill, John B., St. Louis
Oppenheimer, Henry E., St. Louis
O'Reilly, Daniel E., St. Louis
Orenstein, Joseph M., St. Louis
Orgel, M. Norman, St. Louis
Orr, Charles H., Ash Grove
Orrahood, M. David, St. Louis
Osborne, Charles D., Sedalia
Osgood, George M., Kansas City
Ossman, Julian A., Jefferson City
O'Sullivan, George A., St. Louis
Ott, Harold J., Maplewood
Otto, Thomas G., Cape Girardeau
Overesch, Harry B., Kansas City
Overholser, Milton D., Columbia
Owen, James W., Jr., St. Louis
Owens, Bert O., St. Louis
Owens, Graham J., Kansas City
Owens, Hugh H., Kansas City
Owens, Michael J., Kansas City
Owens, Richard L., Kansas City
Owens, Robert H., Kansas City

P

Paddock, Charles S., Joplin
Paddock, Richard, St. Louis
Padfield, Earl G., San Diego, Calif. (Member Jackson County)
Paine, Robert, St. Louis
Paine, William G., Boonville
Painter, L. B., Jr., Portageville
Pakula, Sidney, Kansas City
Palazzo, Frank A., St. Louis
Pallett, Harold A., Kansas City
Paletta, Francis X., St. Louis
Pampush, James J., Address Unknown (Member St. Louis Medical Society)
Papp, Sandor D., Joplin
Parashak, Paul M., St. Louis
Parato, John M., St. Louis
Pareira, Morton D., St. Louis

Parish, Isaac N., Address Unknown
(Member West Central Counties)
Park, George M., Eureka
Park, William E., Cardwell
Park, William I., Jr., Springfield
Parker, A. C., Jr., Poplar Bluff
Parker, Elmer L., Kansas City
Parker, H. Graham, Platte City
Parker, Harry F., Haines City, Fla.
(Member Johnson County)
Parker, Hubert M., Kansas City
Parker, John Z., Pattonsburg
Parker, Joseph W., Jr., Kansas City
Parker, Robert H., North Kansas City
Parker, Thomas W., St. Louis
Parker, William, St. Louis
Parkhurst, Charles L., Houstonia
Parsons, Ernest H., St. Louis
Parsons, Eugene O., Kansas City
Pascoe, James J., Nevada
Passanante, Bartholomew M., St. Louis
Passman, Harold, Kansas City
Pate, O. S., North Kansas City
Patterson, Grover S., Carthage
Patterson, John R., Kansas City
Patterson, William R., Warrensburg
Patton, John F., Denver Colo.
(Member St. Louis Medical Society)
Patton, Leslie E., St. Louis
Paul, Thomas M., St. Joseph
Pawol, S. E., St. Louis
Payne, Bryan T., Lexington
Payne, Meredith J., St. Louis
Payne, Richard J., St. Louis
Pearl, John F., St. Clair
Pearse, Roy W., Jr., Nevada
Pearson, Paul E., Kansas City
Peck, Chester R., Jr., Kennett
Peckham, John W., St. Louis
(Member Laclede County)
Peden, Burnet W., Clayton
Peden, Joseph C., St. Louis
Peden, Joseph C., Jr., St. Louis
Peeler, James O., St. Louis
Peete, Don Carlos, Kansas City
Pelz, Mort D., St. Louis
Pendleton, George F., Kansas City
Penn, Robert M., Silex
Penney, David L., St. Louis
Pennington, F. E., St. Louis
Pennoyer, James, St. Louis
Perkins, Maxwell B., Willow Springs
Perll, Maurice F., Kansas City
Perll, Rita D., Kansas City
Pernoud, Flavius G., Jr., St. Louis
Pernoud, Michael F., St. Louis
Perry, David C., Mound City
Perry, John M., Princeton
Perry, Ralph, Kansas City
Persons, Robert C., Escondido, Calif.
(Member Nodaway-Atchison-Gentry-Worth County)
Peters, Augustus W., St. Louis
Petersen, Fenton J., St. Louis
Petersen, H. E., St. Joseph
Peterson, Carl M., Kansas City
Peterson, Milton C., Kansas City
Peterson, Stanley S., Springfield
Peterson, Walter R., Kansas City
Petry, Ezra L., Kansas City
Petty, Wallace S., Macon
Peugnet, Hubert B., St. Louis
Pfeffer, Robert I., St. Louis
Pfeifer, Oliver C., St. Louis
Pfeiffenberger, Mather, Jr., Alton, Ill.
(Member St. Louis Medical Society)
Pfuetze, Edwin L., Kansas City
Phelan, Emma, Kimmswick
(Member St. Louis Medical Society)
Phillips, Hanford, St. Louis
Phipps, George W., Caruthersville
Pickard, Nicholas S., Kansas City
Pickens, E. Allen, Springfield
Pickens, Edgar E., Kansas City
Pickett, Clarence P., Princeton
Pickrell, Claude D., St. Louis
Piekarski, Anthony A., St. Louis
Pieper, Henry G., St. Louis
Pierron, John B., Kansas City, Kansas
(Member Jackson County)
Piper, Donald K., Oceanside, Calif.
(Member Jackson County)
Pipkin, F. Garrett, Kansas City
Pittam, Radford F., Kansas City
Pitzman, Marsh, St. Louis
Plag, Albert F., St. Louis
Platt, Paul C., Kansas City
Platt, William R., St. Louis
Platz, John H., Carrollton
Plesons, John D., St. Louis
Pletcher, K. E., London, England
(Member Franklin-Gasconade-Warren County)
Ploehn, Emma, St. Louis
Plumlee, William C., Springfield
Plummer, Grover C., Buffalo
Plumpe, W. Tupper, St. Louis
Polk, George M., Lees Summit
Pollock, Ellis L., St. Louis
Pollock, Leo H., Kansas City
Pollock, Maxwell A., St. Louis
Poor, Carl W., Address Unknown
(Member Jasper County)
Poorman, Bert A., Kansas City
Pope, Nathan K., Springfield
Popejoy, H. R., California
Popovich, Paul J., St. Louis
Poggemeier, Wm. H., Jr., St. Charles
Porter, Louis, Kansas City
Porter, Russell C., North Kansas City
Portuondo, Bonaventura C., St. Louis
Post, Cyril A., Poplar Bluff
Post, Lawrence T., St. Louis
Post, M. Hayward, St. Louis
Post, Winfred L., Joplin
Potashnick, Robert, St. Louis
Pote, Thomas B., St. Louis
Potter, Allen B., St. Louis
Potter, Lee G., Kansas City
Potter, Thompson E., St. Joseph
Powell, Benson M., Kansas City
Powell, Carl A., Jefferson City
(Member St. Louis Medical Society)
Powell, Earl A., St. Louis
Powell, Edwin M., Springfield
Powell, Rudolph V., St. Louis
Powers, Evertt, Carthage
Powers, John M., Kansas City
Powers, Pierce W., St. Louis
Pranger, Sylvester H., St. Louis
Prentiss, Harry S., Kansas City
Presnell, Cleitus A., St. Louis
Press, Maurice J., St. Louis
Preston, Albert, Jr., Kansas City
Price, Edward B., Jr., Kansas City
Price, Robert P., Fulton
Printz, Joseph H., Kansas City
Printz, Otto J., Kansas City
Probstein, Jacob G., St. Louis
Proctor, Carter A., Sullivan
Proetz, Arthur W., St. Louis
Pruett, Burchard S., St. Louis
Pruett, Hubert S., St. Louis
Puckett, Cordelia, St. Louis
Pugh, Richard G., Independence
Pulliam, Madison J., St. Louis
Purcell, Harry K., St. Louis
Putnam, John A., Carthage
Pyne, Herbert S., St. Louis
Pyrtle, James R., Centerville

Q

Quinn, Abram T., St. Louis
Quintana, Manuel M., Perryville
Quirin, Warren S., St. Louis
Quisito, Joseph M., Trenton
Quistgard, Paul C., Kansas City

R

Rachlin, Maxwell, Brentwood
Rader, Ada B., Martin City
Raemdonck, Alphonse J., St. Louis
Ragan, Romulus C., Kansas City
Ragsdale, George M., Paris
Rainwater, E. H., Springfield
Ramos, John F., Jr., Kansas City
Ramos, Raoul L., St. Louis
Ramsey, Ora W., Marionville
Ramsey, R. H., St. Louis
Randell, Don Q., St. Charles
Randall, Leslie, Licking
Rannie, Paul R., Independence
Rapp, Harold B., St. Louis
Rawlins, Kelly, Holden
Ray, Richard H., St. Louis
Ready, James H., Florissant
Redmond, William, St. Joseph
Reed, Carl H., Carrollton
Reed, Henry L., Licking
Reeder, Charles C., New Madrid
Reese, A. Victor, Webster Groves
Reeves, Gerald A., St. Charles
Regan, William W., Sheppard A.F.B., Texas
(Member St. Louis Medical Society)
Reh, Edward P., Address Unknown
(Member St. Louis Medical Society)
Reich, Harry A., St. Louis
Reich, Oliver F., Kimmswick
Reichert, M. Cecelia, St. Louis
Reiches, Aaron J., St. Louis
Reichman, John J., Hannibal
Reid, Charles T., Joplin
Reid, James A., Marshall
Reid, William F., St. Louis
Reilly, Leo J., St. Louis
Reilly, Pierce J., St. Louis
Reinhard, Edward H., St. Louis
Reinhardt, George R., San Francisco, Calif.
(Member Jackson County)
Reis, Carl J., St. Louis
Reitz, Carl H., Kansas City
Remley, George C., Kansas City
Rendleman, George F., St. Louis
Repetto, Albert M., St. Louis
Reser, Thomas S., Cole Camp
Resnikoff, Lewis E., St. Louis
Reulbach, Franklin P., Address Unknown
(Member St. Louis County)
Reuter, Louis A., St. Louis
Reynolds, Fred, St. Louis
Reynolds, Garland A., Cape Girardeau
Reynolds, James R., Neosho
Rhoades, Arthur B., Kansas City, Kans.
(Member Jackson County)
Rhodes, Euhlan L., Sedalia
Rice, Earl R., St. Louis
Rice, Grover C., Brunswick
Richardson, Marion W., Kansas City
Richardson, R. G., Jefferson City
Richardson, William R., Union
Richman, Elmer, St. Louis
Richtarsic, Stephen R., Clayton
Richter, William B., Stockton
Ricketson, George M., Hayti
Riddell, Richard V., St. Joseph
Ridings, Harold D., Cape Girardeau
Ries, Douglas A., Richmond Heights
Riggio, Salvatore N., St. Louis
Rigney, Levi M., Springfield
Riley, Fred P., Perryville
Riley, Ralph D., St. Louis
Riley, Ralph W., St. Louis
Riley, William H., St. Louis
Riller, Lowell E., Kansas City
Ringo, Henry J., St. Louis
Rinkel, Herbert J., Kansas City
Riordan, Lawrence M., St. Louis
Rising, Jesse D., Kansas City
Ritchey, Mary G., St. Louis
Ritchie, Frances R., St. Louis
Ritter, Hubert A., St. Louis
Ritter, Raymond A., Cape Girardeau
Robbins, Martin V., Peculiar
Roberson, John H., Lilbourn
Roberts, Harold K., St. Louis
Roberts, Harold M., Kansas City
Roberts, John P., Kirkwood
Roberts, John R., Brentwood
Roberts, Sam E., Kansas City
Robertson, Frank G., St. Louis
Robertson, J. Archie, Kansas City
Robertson, LeRoy L., St. Louis
Robertson, Robert C., St. Cloud, Minn.
(Member Ozarks Medical Society)
Robichaux, Eugene B., Excelsior Springs
Robichaux, Eugene C., Excelsior Springs
Robinson, Arthur W., Kansas City
Robinson, Don, Address Unknown
(Member Saline County)
Robinson, Donald E., Kansas City
Robinson, Donald E., Portsmouth, Va.
(Member Jackson County)
Robinson, Edith C., Address Unknown
(Member St. Louis County)
Robinson, Edward E., Adrian
Robinson, Ernest Kip, Kansas City
Robinson, George G., Humansville
Robinson, G. Wilse, Kansas City
Robinson, G. Wilse, Jr., Kansas City
Robinson, John A., Edgerton
Robinson, William J., Kansas City
Robison, James T., Jr., Kansas City
Roblee, Melvin A., St. Louis
Roche, Maurice B., St. Louis
Rodeman, John M., Sedalia
Rodgers, Elrie P., Columbia
Rodgers, Samuel U., Kansas City
Roe, Allen N., St. Louis
Roebber, Harry M., Bonne Terre
Roehrs, Marvin E., Marshall
Roesler, Paul J., Farmington
Rogers, C. H., St. Louis
Rogers, John A., University City
Rohlfing, Edwin H., St. Louis
Rohlfing, Walter H., St. Louis
Rolens, Louis E., Granby
Roller, Merrill J., Hannibal
Rollins, H. D., Winona
Rolwing, E. Charles, Charleston
Romendick, Samuel S., St. Louis
Ronald, Douglas C., Butler
Roock, Paul C., Omaha, Nebr.
(Member Phelps-Crawford-Dent-Pulaski-Maries County)
Roper, Stanley D., Ozark
Rose, Charles W., Kansas City
Rose, Dalton K., St. Louis
Rose, Frank H., Albany

Rosen, Charles S., St. Louis
Rosen, Max, Springfield
Rosenbaum, Harry D., St. Louis
Rosenberg, Henry E., St. Louis
Rosenberg, Meyer B., St. Louis
Rosenfeld, Henry, St. Louis
Rosenfeld, Herman, St. Louis
Rosenthal, Frances E., Joplin
Rosenthal, Irwin I., St. Joseph
Rosenthal, Leonard G., St. Louis
Ross, Charles M., St. Louis
Ross, Herman C., Brentwood
Ross, Pren J., Grant City
Rost, William B., St. Joseph
Roth, John J., St. Louis
Rothman, David, St. Louis
Rothman, Paul M., St. Louis
Rotter, Julius C., St. Louis
Roufa, Joseph F., St. Louis
Roulhac, George E., St. Louis
Roundy, Collis I., St. Joseph
Rouse, Ernest T., St. Louis
Rowe, Alfred R., Poplar Bluff
Rowlette, Avery P., Moberly
Roy, Gustave A., Oceanside, Calif.
(Member Jackson County)
Royce, Robert K., St. Louis
Royse, Roy P., Sullivan
Royston, Grandison D., Hope, Ark.
(Member St. Louis Medical Society)
Rubin, Sidney, Kansas City
Rubnitz, Leon H., Kansas City
Ruddell, George W., St. Louis
Rudi, Herbert J., St. Louis
Rufe, Jack R., Kansas City
Ruff, T. Eugene, Little Rock, Ark.
(Member Cape Girardeau County)
Ruhling, Rudy, St. Louis
Rund, Emmet H., St. Louis
Rupe, Wayne A., St. Louis
Rusk, Earl McD., New Bloomfield
Russell, Barbara E., Rolla
Russell, James M., Monett
Russell, Robert K., Raytown
Rutledge, John F., Crystal City
Rutledge, Paul E., Kirkwood
Rutledge, William J., Campbell
Ryan, John B., Hermann
Ryan, John H., St. Joseph
Ryan, John J., Clayton
Ryan, Linus M., St. Louis
Ryan, Robert A., Mountain Grove
Ryan, Robert E., St. Louis
Ryland, Caius T., Lexington

S

Sachar, Leo A., St. Louis
Saferstein, A. Lester, Kansas City
Saferstein, T. Harry, St. Joseph
St. John, Dewey, St. Louis
St. John, Thomas C., St. Louis
Saladino, Anthony, Kansas City
Sale, Llewellyn, St. Louis
Sale, Llewellyn, Jr., St. Louis
Salisbury, William J., St. Louis
Sample, George A., Chaffee
Samson, Ralph B., Kansas City
Samuelsen, Edward A., Kansas City
Sanders, George E., Excelsior Springs
Sanders, Robert D., St. Louis
Sanders, Theodore E., St. Louis
Sanders, William F., Kansas City
Sandy, Charles, Prairie Village, Kansas
(Member Cooper County)
Sanford, Joseph H., St. Louis
Sante, L. R., St. Louis
Sargent, Alden P., Sikeston
Sargent, Frederich K., St. Louis
Sarno, S. M., Morehouse
Sartin, John M., Springfield
Saslow, George, St. Louis
Sassin, Edmond F., St. Louis
Sato, George, Mitchel AFB, N. Y.
(Member St. Louis Medical Society)
Satterfield, Val B., Bremerton, Wash.
(Member St. Louis Medical Society)
Sauer, F. J. Dean, Clayton
Sauer, Gordon C., St. Joseph
Sauer, William E., St. Louis
Sauer, W. Nicholas, St. Louis
Saunders, Everett L., Independence
Sausville, Albert J., St. Louis
Sawyers, Gordon E., Kansas City
Saxton, John A., Jr., St. Louis
Saylor, Robert K., Joplin
Scarpellino, Louis, Kansas City
Schaaf, Katherine M., Address Unknown
(Member St. Louis Medical Society
Schaefer, Charles L., Kansas City
Schaerrer, Hans, Kansas City
Schaerrer, William C., Kansas City
Schaper, Ernest H., St. Louis
Schattyn, Martyn, St. Louis
Schauffler, Robert M., Kansas City
Schechter, Samuel E., St. Louis
Scheele, Paul M., University City
Scheer, George E., St. Louis
Scheff, Harold, St. Louis
Scherman, Victor E., St. Louis
Schertz, Truman B., St. Joseph
Scheuber, Charles, Columbia
Schewe, Elmer J., Jr., Clayton
Schiele, Herbert S., Jr., St. Louis
Schiffmacher, Jack E., Kansas City
Schlenker, John L., St. Louis
Schlenker, Lawrence, St. Louis
Schlossstein, Adolph G., St. Louis
Schluer, Elmer P., St. Louis
Schlueter, Newell W., St. Louis
Schlueter, Robert E., St. Louis
Schmidt, Charles A., Washington
Schmidt, Edmund M., St. Louis
Schmidt, Edwin H., St. Louis
Schmidt, Herbert H., Washington
Schmiemeier, Herman A., St. Louis
Schmiemeier, Roy H., Afton
Schmitz, Edgar F., St. Louis
Schneider, Sam, St. Louis
Schneider, Vincent A., St. Charles
Schnoebelen, Paul C., St. Louis
Schoeberl, C. B., Great Lakes, Ill.
(Member Jasper County)
Scholz, Roy P., St. Louis
Schooley, Renick C., Odessa
Schopp, Alvin C., St. Louis
Schorer, Edwin H., Kansas City
Schrepel, Herbert O., St. Louis
Schroeder, Sidney O., Liberty
Schuchat, W. Louis, St. Louis
Schuck, Philip, St. Louis
Schulein, Vernon E., Crystal City
Schulte, G. A., Joplin
Schultz, Loraine E., Kansas City
Schultz, Samuel, St. Louis
Schulz, A. P. Erich, St. Charles
Schulz, Gustav B., Cape Girardeau
Schumacher, Cyril W., St. Louis
Schutz, Carl B., Kansas City
Schutz Richard B., Kansas City
Schwartz, Alfred J. C., Washington
Schwartz, Alfred S., St. Louis
Schwartz, Eugene J., Springfield
Schwartz, Frederick O., St. Louis
Schwartz, Henry G., St. Louis
Schwartzman, Bernard, St. Louis
Schwarz, Henry, II, Columbia
Schweiss, John F., Camp LeJeune,
N. Carolina
(Member St. Louis Medical Society)
Schweitzer, Fred C., Jr., Springfield
Sciortino, Gaspare, St. Louis
Sciortino, John S., St. Louis
Scopelite, Joseph A., St. Louis
Scorse, Sidney W., Joplin
Scott, Clive D., Louisiana
Scott, Elijah A., St. James
Scott, Elwin P., St. Louis
Scott, Henry F., Ballwin
Scott, J. U., Harrisonville
Scott, Wendell G., St. Louis
Seabaugh, D. Rusby, Cape Girardeau
Seabaugh, Dayton I. L., Jackson
Seabaugh, L. R., Cape Girardeau
Seabaugh, Oda L., Cape Girardeau
Seabaugh, Ottis D., Webster Groves
Seabaugh, William O. L., Cape Girardeau
Seabold, John A., St. Louis
Seaman, William B., St. Louis
Seddon, John W., St. Louis
See, William B., Columbia
Seely, Clark W., Kansas City
Seib, George A., St. Louis
Seidel, Joshua, Excelsior Springs
Selle, Harold C., Ferguson
Sellers, Charles J., Mt. Moriah
Senn, Emmett J., Herculaneum
Senne, Herbert C., St. Joseph
Sennott, John S., Jefferson City
Senor, Samuel D., St. Joseph
Senor, Samuel E., St. Joseph
Senseney, Eugene T., St. Louis
Senturia, Ben H., St. Louis
Senturia, Hyman R., St. Louis
Sertl, John D., St. Louis
Settle, Emmett B., Rockport
Sevin, Omar R., St. Louis
Sewell, Minor F., Kansas City
Sewell, W. S., Springfield
Sewing, Arthur H., St. Louis
Sexauer, Arthur E., Ste. Genevieve
Sexton, Daniel L., St. Louis
Sexton, Elmer E., St. Louis
Shackelford, Horace H., St. Louis
Shahan, Philip T., St. Louis
Shahan, William E., St. Louis
Shaner, John F., St. Louis
Shanklin, Benjamin, St. Louis
Shapiro, Lazare M., Kansas City
Shapleigh, John B., St. Louis
Sharp, Cecil A. Z., St. Louis
Sharp, William L., St. Louis
(Member Saline County)
Shatz, Burton A., Philadelphia, Pa.
(Member St. Louis County)
Shaver, Nellie A., St. Louis
Shaw, Carvel T., Hermann
Shaw, William J., Fayette
Shaw, William J., Jr., Fayette
Sheedy, John A., Altoona, Pa.
(Member St. Louis Medical Society)
Sheets, John S., St. Louis
Sheets, Martin E., St. Louis
Shelby, Mitchell H., Cape Girardeau
Shelden, Russell D., Kansas City
Sheldon, John G., Kansas City
Sheldon, John, Kansas City
Shelton, Edward O., Eldon
Shelton, Harold J., St. Louis
Shepherd, Charles T., St. Louis
Sherard, Julius C., St. Louis
Sheridan, Edmund R., St. Louis
Sherman, Alfred I., St. Louis
Sherwin, Charles S., St. Louis
Sherwood, Loraine, Kansas City
Shevlin, Charles F., St. Joseph
Shifrin, Alexander, Kansas City
Shirey, Arnold G., Hayti
Shobe, Frank O., St. Louis
Shofstall, Charles K., Kansas City
Shofstall, William H., Kansas City
Shook, Lester D., Kansas City
Shoss, Milton, Cape Girardeau
Shoulders, Harrison H., Jr., St. Louis
Shouse, Edwin, Lawson
Shrader, E. Lee, St. Louis
Shreffler, Algie R., Tavernier, Fla.
(Member St. Louis Medical Society)
Shuey, Herbert H., Kansas City
Shuford, Wade H., Camp Kilmer, N. J.
(Member St. Louis County)
Shull, George D., Jefferson City
Shumate, D. L., Kansas City
Shumate, L. St. Clair, Reeds Spring
Shutt, Cleveland H., St. Louis
Shy, James C., St. Louis
Shypper, Moses J., Kansas City
Siceluff, Joseph G., Springfield
Siddall, H. Stewart, New London, Ohio
(Member St. Louis Medical Society)
Siebert, Walter J., St. Louis
Siegel, Carl D., Sedalia
Siegel, Peter V., Smithton
Siesener, Herbert H., St. Louis
Sievers, Edward F., St. Louis
Signorelli, Andrew J., St. Louis
Silsby, Don H., Springfield
Silsby, Don J., Springfield
Silsby, Harry D., Springfield
Silverberg, Charles, St. Louis
Silvermintz, Saul D., Richmond Heights
Simmons, B. B., St. Joseph
Simmons, Leroy, Sarcoxie
Simmons, Sterling P., Marshall
Simon, David L., St. Louis
Simon, Jermone I., St. Louis
Simon, Selig, St. Louis
Simpson, Eber, St. Louis
Simpson, Emerson L., Springfield
Simpson, Guy L., St. Louis
Simpson, Lloyd, Columbia
Simpson, Morris B., Kansas City
Simril, Wayne A., Clayton
Sims, John L., Joplin
Sinclair, Alexander B., Kansas City
Singleton, J. Milton, Kansas City
Siniscal, A. A., Rolla
Sinkler, William H., St. Louis
Sinner, Bernard L., St. Louis
Sipes, Frank M., Goshen, Indiana
(Member West Central Counties)
Sisk, James C., Clayton
Sisson, Richard G., St. Louis
Skaggs, Thomas R., Mountain View
Skeffington, Mary Jane, St. Louis
Skilling, David M., Jr., St. Louis
Skinner, John O., Kansas City
Skinner, John S., University City
Skinner, John T., Kansas City
Skoog, Andrew L., Kansas City
Slaughter, Shelby C., Fredericktown
Slentz, E. T., Joplin
Slentz, William A., Kansas City
Slusher, Ernest W., Kansas City
Small, Walter L., Kansas City
Smiley, William, St. Louis
Smit, Herbert M., St. Louis
Smit, William M., St. Louis
Smith, Andrew J., St. Joseph
Smith, Arthur B., Kansas City
Smith, Audra B., Sikeston

Smith, Benjamin F., Jr., St. Louis
Smith, C. Souter, Springfield
Smith, Carl C., Moberly
Smith, Clifton, St. Joseph
Smith, David E., University City
Smith, Frank J., St. Louis
Smith, Garland F., St. Louis
Smith, Gladys C., Address Unknown
(Member Boone County)
Smith, Herbert P., St. Louis
Smith, Hugh R., St. Louis
Smith, Ira T., Kansas City
Smith, J. Earl, St. Louis
Smith, James O., Clinton
Smith, Kathleen, St. Louis
Smith, Louis J., New Madrid
Smith, Milton, St. Louis
Smith, Robert M., St. Louis
Smith, Robert W., Marceline
Smith, Roland T., Joplin
Smith, Rollin H., West Plains
Smith, Stephen D., Columbia
Smith, Ulysses S., Hannibal
Smith, Vernon L., San Francisco, Calif.
(Member Lincoln-St. Charles County)
Smith, William A., Webster Groves
Smith, William J., Hannibal
Smith, William R., Carthage
Smolik, Edmund A., St. Louis
Snavely, Edmund C., Sedalia
Snead, William H., Springfield
Sneid, Philip, Kansas City
Snider, Samuel H., Kansas City
Snyder, Edward N., St. Louis
Soderberg, N. B., San Antonio, Texas
(Member Jackson County)
Sommer, Conrad S., St. Louis
Soper, Horace W., St. Louis
Sophian, Abraham, Kansas City
Soule, Samuel D., St. Louis
Spafford, Allen L., Kansas City
Spain, Kate C., St. Louis
Spalding, Wilber B., Plattsburg
Spaulding, Robert W., Fort Smith, Ark.
(Member St. Louis Medical Society)
Spaulding, William, Poplar Bluff
Spears, Charles A., Pierce City
Speidel, F. W., Senath
Spelman, A. E., Smithville
Spence, Elbert L., Kennett
Spencer, Floyd H., St. Joseph
Spencer, Selden, St. Louis
Spinzig, Edgar W., Kirkwood
Spitz, Milton A., St. Louis
Spitzer, Ernest, University City
Spivy, Raymond M., St. Louis
Spoeneman, Marlin C., St. Louis
Spoenemann, Walter H., St. Louis
Sprong, Aaron A., Excelsior Springs
Stacey, Wallace R., Independence
Stacy, Winton T., New York, N. Y.
(Member Buchanan County)
Staehle, Melvin E., St. Louis
Staggs, William A., Kansas City
Stahl, Fred A., Springfield
Stahl, Phineas D., St. Louis
Stamey, James T., St. Joseph
Standley, Eugene T., Portsmouth, Va.
(Member St. Louis County)
Stanton, Mearl F., St. Louis
Stanze, Frank J., St. Louis
Staples, Daniel E., Rolla
(Member St. Louis Medical Society)
Starkloff, Gene B., St. Louis
Starkloff, Max, St. Louis
Statland, Harry, Kansas City
Statland, Morris, Bremerton, Wash.
(Member Jackson County)
Staton, R. Hamilton, Carrollton
Stauffacher, C. Gordon, Sedalia
Stauffer, Harry B., Jefferson City
Stearns, Colby S., San Francisco, Calif.
(Member St. Louis Medical Society)
Stecher, John F., St. Louis
Stecker, George, St. Louis
Steffen, Lawrence F., Kansas City
Stein, Arthur W., St. Louis
Stein, Harry J., St. Louis
Stein, Leonard A., St. Louis
Steinbeck, Herbert D., Union
Steinberg, Franz U., St. Louis
Steiner, Albert S., St. Louis
Steiner, Alexander J., St. Louis
Stephan, August P., Jefferson City
Stephens, LeRoy J., St. Louis
Stephens, Louis F., St. Louis
Stephens, William A., St. Louis
Stephenson, Hugh E., Jr., New York, N. Y.
(Member St. Louis Medical Society)
Sterling, C. E., St. Louis
Sterling, John A., Maplewood
Stevens, Robert W., St. Louis
Stevenson, Alan J., Tampa, Fla.
(Member St. Louis Medical Society)
Stewart, Floyd, St. Louis
Stewart, Frances H., St. Louis
Stewart, J. W., St. Louis
Stewart, R. Wendell, Springfield
Stewart, Robert H., Kansas City
Stewart, William J., Columbia
Stickle, A. W., St. Louis
Stickler, Ralph O., Kirksville
Stindel, Charles E., Webster Groves
Stine, Dan G., Columbia
Stines, Thomas I., Jr., Address Unknown
(Member St. Louis Medical Society)
Stock, Albert E., St. Louis
Stocking, Lyman C., Kirkwood
Stockton, Raymond W., Kansas City
Stockwell, A. Lloyd, Kansas City
Stoelzle, Joseph D., Kirkwood
Stokes, Julius B., Excelsior Springs
(Member Ozarks Medical Society)
Stolar, Jacob, St. Louis
Stone, Charles A., St. Louis
Stone, Edna M., St. Louis
Stone, William E., Boonville
Stormont, Riley M., Webb City
Stratemeier, Edward H., Kansas City
Strauchen, Gilbert W., Webster Groves
Strauss, Arthur E., St. Louis
Streetor, Roderick D., Mexico City, Mexico
(Member Chariton-Macon-Monroe-Randolph County)
Strehlman, Benjamin G., Union
Stricker, Emil A., St. James
Stricker, Harold C., Jefferson City
Striegel, B. F., St. Louis
Strong, Richard M., Smithville
(Member Jackson County)
Strub, Giles J., Randolph A.F.B., Texas
(Member St. Louis Medical Society)
Stryker, Garold V., St. Louis
Stuart, Byron M., Boonville
Stuart, Daniel D., Brunswick
Stude, William C., St. Louis
Stuebner, Roland W., Clayton
Stutsman, Albert C., St. Louis
Styblo, Clarence J., St. Louis
Suarez, Nelson, Slater
Sudholt, Alfred F., Jr., St. Louis
Sugarbaker, Everett D., Jefferson City
Suggett, Finis C., Columbia
Sullivan, Clement J., St. Louis
Sullivan, Hazard, Miami
Sullivan, William J., Providence, R. I.
(Member North Central Counties)
Sultzman, Francis E., Hannibal
Summers, Caldwell B., Kansas City
Summers, Jacob H., Lebanon
Summers, John B., St. Louis
Summers, Joseph S., Jefferson City
Summers, Joseph S., Jr., Jefferson City
Sunderman, Raymond C., St. Louis
Susanka, William D., Affton
Sutphin, John B., Joplin
Sutter, Richard A., St. Louis
Sutton, Charles E., Cape Girardeau
Sweaney, Isaac F., Oregon
Sweet, Herbert C., Affton
Sweets, Henry H., Jr., Columbia
Sweiger, James H., Maysville
Swekosky, Frank J., St. Louis
Swisher, Robert C., Kansas City
Switzer, D. Clyde, Grandview
Szymanski, Stanley R., Moberly

T

Tabris, Julius A., Kansas City
Tadlock, Baxter W., St. Joseph
Tahir, Mohammad, St. Joseph
Talbott, Hudson, St. Louis
Tamblyn, Claire L., Kansas City
Tanaka, George M., San Francisco, Calif.
(Member St. Louis Medical Society)
Tanner, Robert H., Jefferson City
Tapper, Stephen M., St. Louis
Tarrasch, E. L., Springfield
Tarson, Solomon S., Kansas City
Tarver, Quinton, Kennett
Tarvydas, Francis, Jefferson Barracks
(Member Moniteau County)
Tashma, Sigmund, St. Louis
Tasker, Charles B., Kansas City
Tate, Lloyd L., St. Louis
Taussig, Barrett L., St. Louis
Taylor, Byron H., Jr., Flat River
Taylor, Duane R., New York, N. Y.
(Member St. Louis County)
Taylor, Edward L., Steele
Taylor, Herbert I., Jefferson City
Taylor, Leo T., Neosho
Taylor, Leon A., Jefferson City
Taylor, Van Wm., Bonne Terre
Taylor, William E., Springfield
Teachenor, Frank R., Kansas City
Teall, Raymond E., Kansas City
Teiber, Frederick W., St. Louis
Teneglia, Eutimio D., St. Louis
Tess, Melvin J. H., St. Louis
Tesson, James A., Kansas City
Thale, Thomas, St. Louis
Theel, Otto W., Jr., Kansas City
Thiele, George H., Kansas City
Thiessen, Edward H., Kansas City
Thoma, George E., Jr., Randolph A.F.B., Texas
(Member St. Louis Medical Society)
Thomas, Charles S., St. Louis
Thomas, Forrest, St. Joseph
Thomas, Helen E., Columbia
Thomas, Horace E., Columbia
Thomas, Miles E., Fort Riley, Kansas
(Member Jackson County)
Thomason, Henry E., Kansas City
Thompson, Arthur M., St. Louis
Thompson, Emma A. B., Columbia
(Member Grand River Medical Society)
Thompson, F. G., Jr., St. Joseph
Thompson, J. William, St. Louis
Thompson, Lawrence D., St. Louis
Thompson, Ralph L., St. Louis
Thompson, William G., Holden
Thorn, Druery R., Kansas City
Threadgill, Jesse M., Forsyth
Throgmorton, Howard B., Sikeston
Thurber, Claude M., Windsor
Thym, Henry P., St. Louis
Tichenor, Robert W., Sappington
Tillman, Walter W., Jr., Springfield
Timerman, Arthur R., St. Joseph
Tincher, Joseph C., Boonville
Tindall, Robert N., St. Louis
Tinsley, John C., Jr., Columbia
Titterington, Paul F., St. Louis
Tjoflat, Oliver E., St. Louis
Tobias, Norman, St. Louis
Todd, D. Clay, St. Louis
Todd, Thomas B., Nevada
Tomlinson, Wm. L., St. Louis
Tonelli, George L., St. Louis
Toney, Lee E., Piedmont
(Member South Central Counties)
Tooker, Charles W., St. Louis
Torin, Bernice A., St. Louis
Touhill, Neal J., Dexter
Towers, O. W., St. Charles
Townsend, James A., Clayton
Townsend, Vincent F., Maplewood
Tracy, Herbert A., Belton
Trader, Charles B., Sedalia
Treadway, W. W., Silex
Treharne, Frank E., Independence
Treiman, Robert C., St. Louis
Tremain, E. E., Maplewood
Tremain, Irl G., St. Louis
Trigg, Joseph F., St. Louis
Trimble, George X., Columbia
Triplett, Jacob S., Harrisonville
Tripodi, Anthony M., Tacoma, Wash.
(Member St. Louis Medical Society)
Tripodi, Donald W., Excelsior Springs
Trippe, Harrison C., Kansas City
Trobaugh, Frank E., Jr., St. Louis
Trolinger, J. H., Jackson
Trotter, Francis O., Jr., St. Louis
Trowbridge, B. C., Kansas City
Trowbridge, Ellsworth H., Kansas City
Trowbridge, Ellsworth H., Jr., Kansas City
Trueblood, Alva C., Jr., St. Louis
Tureen, Louis L., St. Louis
Turner, Glenn O., Springfield
Turner, Percy C., Kansas City
Turner, Rush, St. Louis
Tuthill, Herbert, Kansas City
Tuttle, Floyd W., Blue Springs
Twedell, Donald L., St. Louis
Twin, Edward J., Kansas City
Twyman, Elmer D., Kansas City
Twyman, Richard A., Kansas City
Tygett, G. J., Cape Girardeau
Tyzzer, Robert N., LaJolla, Calif.
(Member St. Louis Medical Society)

U

Uhlemeyer, Henry A., St. Louis
Uhlemeyer, Henry A., Jr., St. Louis
Ulett, George A., St. Louis
Ulett, Pearl C., St. Louis
Underwood, Dick H., Kansas City
Underwood, Harry A., Kansas City
Underwood, Johnson, Parkville
Underwood, Johnson, Jr., Kansas City
Underwood, Millard K., Rolla
Underwood, Ross H., Kansas City
Unger, Harold, Kansas City
Unterberg, Hillel, St. Louis

Upshaw, Paul O., Springfield
Upsher, Albert E., Blue Springs
Urban, Edgar D., Sikeston
Utterman, William F., Perryville

V

Vail, A. Denton, Springfield
Valentine, Herbert S., Kansas City
VanBiber, James T., Independence
Van Cleve, John D., Malden
Vandel, Dwight T., Kansas City
Vandiver, Virgil D., Chillicothe
Vandover, John T., St. Louis
Van Matre, R. M., St. Louis
Van Urk, Jules B., Carthage
Van Vranken, Eugene E., Langley A.F.B., Va.
(Member St. Louis Medical Society)
Vatterott, Paul B., St. Louis
Vaughan, J. Russell, St. Louis
Vaughn, A. N., St. Louis
Veatch, Charles A., New York, N. Y.
(Member Saline County)
Venable, Howard P., St. Louis
Verda, Dominic J., St. Louis
Vermillion, Crofford O., St. Louis
Vezeau, Stephen, St. Louis
Vigo, Anthony W., Camp Crowder
(Member St. Louis County)
Vilmer, Charles, Kansas City
Vincent, Jack C., Kansas City
Vinyard, Paul, St. Louis
Vinyard, Robert, Springfield
Virant, John A., Clayton
Virden, C. Edgar, Kansas City
Virden, Herbert H., Kansas City
Vitale, Anthony J., St. Louis
Vitale, Nicholas S., St. Louis
Vitt, Alvin E., St. Louis
Vitt, Edwin F., St. Louis
Viviano, Joseph G., St. Louis
Vivona, Stefano, New York, N. Y.
(Member St. Louis Medical Society)
Vizgird, J. J., St. Louis
Vogel, Eugene A., St. Louis
Vogt, William H., Jr., St. Louis
Vohs, Carl F., St. Louis
Vollmar, Clarence J., Webster Groves
Von Kaenel, Joseph E., St. Louis
Votaw, Robert E., Clayton
Vournas, Christopher G., St. Louis

W

Wachter, Harry E., St. Louis
Waddle, Theodore L., Dexter
Wade, Frederick E., Kansas City
Wade, James P., St. Louis
Wadlow, Ernst E., St. Joseph
Wagenbach, William F., St. Louis
Waggoner, Charles M., Columbia
Waggoner, Sharon E., St. Joseph
Waickman, Francis J., St. Louis
Wakefield, Franklin, Jr., Kansas City
Wakeman, Jasper N., Springfield
Walker, Ambrose T., Mammoth Spring, Arkansas
(Member South Central Counties)
Walker, George S., Clinton
Walker, Hugh B., Clinton
Walker, James C., Kansas City
Walker, John W., Kansas City
Walker, Paul W., Joplin
Walker, Willard B., St. Louis
Walker, William E., La Monte
Wall, Albert, St. Louis
Wall, Arthur H., Sierra Madre, Calif.
(Member Jackson County)
Wall, Emmett D., St. Louis
Wall, Harry C., Kansas City
Wall, Harvey M., Windsor
Wallace, Edgar S., St. Louis
Wallace, Frank B., Kansas City
Wallace, M. Marvin, Detroit, Mich.
(Member St. Louis Medical Society)
Walsh, Theodore E., St. Louis
Walsh, Wm. Timothy, Kingwood, W. Va.
(Member Greene County)
Walter, Archie L., Sedalia
Walters, Harold E., St. Louis
Walters, John H., St. Louis
Walters, Laura, St. Louis
Walters, William H., St. Louis
Walterschied, John H., Hannibal
Walthall, Damon O., Kansas City
Walther, Roy A., Overland
Walther, Roy A., Jr., Overland
Walton, Franklin E., St. Louis
Walton, Josiah, H., Clayton
Ward, Joe, Lexington
Warner, George K., Lakewood, Colo.
(Member St. Louis Medical Society)
Warner, Robert G., St. Louis
Washburn, J. Loren, Versailles
Washburn, Walter L., North Kansas City
Washington, Edw. Lee, Columbia
Wasserman, Helman C., St. Louis
Waterman, F. M., Liberty
Waters, E. B., Kirkwood
Watkins, George L., Farmington
Watkins, George L., Jr., Farmington
Watson, B. Frank, Independence
Watson, Ethel, Independence
Wattenberg, Carl A., St. Louis
Watts, Byron E., Jefferson City
Waxman, David, Kansas City
Waxman, Jame Z., Kansas City
Wayland, Thomas A., St. Louis
Weaver, John L., Kansas City
Weaver, Richard H., St. Louis
Webb, J. W., Breckenridge
Webb, Leslie R., Springfield
Webb, Leslie R., Jr., Springfield
Webb, Lewis M., St. Louis
Webb, Marion A., St. Louis
Webb, Paul B., St. Louis
Webb, Paul K., St. Louis
Weber, Eugene P., St. Louis
Weber, Sol, St. Louis
Weber, William K., St. Louis
Webster, Joseph, Kansas City
Webster, Roger W., San Jose, Calif.
(Member Jasper County)
Weger, Carl C., Keytesville
Wegner, Carl R., St. Louis
Weiford, Edward C., Kansas City
Weiler, Thomas J., St. Louis
Weinel, Francis G., St. Louis
Weinhaus, Robert S., St. Louis
Weinsberg, William C., St. Louis
Weintraub, Soloman A., St. Louis
Weir, Don C., St. Louis
Weir, Royal A., St. Louis
Weis, Matthew W., St. Louis
Weisbrod, Wilfred B., East Prairie
Weisman, Sol, St. Louis
Weiss, Richard S., St. Louis
Weitman, Maximiliam, St. Louis
Welborn, William S., Amarillo, Texas
(Member St. Louis Medical Society)
Welch, Hooper W., St. Louis
Welker, Joseph E., Kansas City
Well, J. W., Palmyra
Welsh, Laurence C., St. Louis
Weltscheff, Christo A., Kansas City
Wempe, G. Raymond, Maryville
Wendell, Margaret R., Columbia
Wennerman, Sam F., St. Louis
Wentzel, Louis R., St. Louis
Wenzel, Peter S., St. Louis
Wepprich, Michael S., Washington
Werner, August A., St. Louis
Werner, Franklin C., Kansas City
Werner, William A., St. Louis
Werth, Duncan S., Kirkwood
Wescoat, William H., Cape Girardeau
West, Joseph W., St. Louis
West, William D., Address Unknown
(Member Chariton-Macon-Monroe-Randolph County)
Westerman, Henry C., St. Louis
Westlake, Samuel B., St. Louis
Weston, Ursa C., Galt
Westphaelinger, Henry F., St. Louis
Westrup, Arthur W., Webster Groves
Westrup, Ellsworth A., Webster Groves
Weyerich, Leon F., St. Louis
Wheeler, John H., Kansas City
Whitaker, Topsy T. H., East Prairie
White, Charles A., St. Louis
White, Charles H., Mission, Kansas
(Member Jackson County)
White, Edwin C., Kansas City
White, George A., Kansas City
White, Homer E., Naylor
White, Orville O., St. Louis
White, Park J., St. Louis
White, R. Ned, Springfield
White, Robert E., San Antonio, Texas
(Member St. Louis Medical Society)
White, Stoughton F., Kansas City
White, T. Wistar, St. Louis
White, William H., Clayton
White, W. H., Jr., Clayton
Whitehead, Frank F., Neosho
Whiteman, John R., Kansas City
Whitener, Paul R., Overland
Whitman, Doyle C., Kansas City
Whitsell, John C., St. Joseph
Whitsell, Ora E., St. Joseph
Whitten, Marion F., Carthage
Wiatt, William S., LaJolla, Calif.
(Member St. Louis Medical Society)
Wiegand, Herbert C., St. Louis
Wien, Irving A., Kansas City
Wiener, Meyer, Coronado, Calif.
(Member St. Louis Medical Society)
Wiese, Harry W., St. Louis
Wilbur, Clifford H., Polo
Wilbur, Ronald E., Cameron
Wilcox, Claude V., St. Louis
Wilcox, Howard L., Boonville
Wilcoxen, William B., Bowling Green
Wild, Aloysius A., St. Louis
Wiles, Jack N., West Plains
Wilhelm, Warren F., Kansas City
Wilhelmi, Otto J., St. Louis
Wilkinson, Everett A., Kansas City
Will, Leo A., St. Louis
Williams, Charles S., Malden
Williams, Delon A., Kansas City
Williams, Edw. B., Jr., St. Louis
Williams, James E., Doniphan
Williams, John W., Oak Grove
(Member Lafayette-Ray County)
Williams, John W., Springfield
Williams, John W., Jr., Springfield
Williams, Joseph C., Jr., Kansas City
Williams, Luke E., Kansas City
Williams, Ray D., St. Louis
Williams, R. S., Mexico
Williams, Robert A., Kansas City
Williams, Robert F., Springfield
Williams, Vincent T., Kansas City
Williamson, O. E., St. Louis
Williamson, Walter E., St. Louis
Williamson, William H., Mokane
Willis, John B., Mayview
Willis, Norman E., Poplar Bluff
Willits, Lyle G., Kansas City
Willoughby, James W., Liberty
Willoughby, Jean B., Kansas City
Willumsen, Henry C., St. Joseph
Wilson, Alice H., Joplin
Wilson, Charles F., Cape Girardeau
Wilson, Clifford C., Kansas City
Wilson, Fernando I., Kansas City
Wilson, Fred K., Winston
Wilson, Henry M., Alexandria, La.
(Member St. Louis Medical Society)
Wilson, Hester J., Kansas City
Wilson, Hugh M., St. Louis
Wilson, Keith S., St. Louis
Wilson, Kenneth O., St. Louis
Wilson, L. C., Kennett
Wilson, Robert P. C., Marshall
(Member Platte County)
Wilson, Virgil R., Rosendale
Wilucki, Leo E., St. Louis
Wilucki, Melvin R., St. Louis
Wimber, Thomas C., St. Louis
Wimp, J. J., Kirksville
Windmiller, Myrl E., Columbia
Winkelman, Esther B., Kansas City
Winkler, L. F., Wausau, Wisc.
(Member St. Louis Medical Society)
Winn, George W., Boonville
Winston, Bernard H., Kansas City
Winter, Tyrus D., St. Louis
Winterer, Roland A., St. Louis
Winters, F. A., St. Louis
Wippo, Edgar W., St. Louis
Wirthlin, Edward H., St. Louis
Wise, George W., Kansas City
Wisser, John J., St. Joseph
Wissmath, Frank S., Clayton
Wissner, Seth, Normandy
Withers, Orval R., Kansas City
Withrow, John B., North Kansas City
Witt, Clyde M., St. Louis
Wittwer, Hugh J., St. Louis
Wolf, Jack W., Kansas City
Wolff, Paul G., Cape Girardeau
Woltzen, Samuel W., Urich
Womble, James G., Augusta, Georgia
(Member St. Louis Medical Society)
Wommack, Fred L., Crane
Wood, Bennett R., St. Louis
Wood, Edward P., Alexandria, Va.
(Member St. Louis Medical Society)
Wood, George F., Fulton
Wood, George H., Carthage
Wood, Laurence E., Kansas City
Wood, William G., St. Louis
Wood, William W., Rochester, Minn.
(Member Greene County)
Woodruff, Frederick E., St. Louis
Woods, Harold V., Independence
Wooldridge, W. E., Springfield
Woolf, Ralph B., St. Louis
Woolsey, Doris S., Kirkwood
Woolsey, Robert D., St. Louis
Wortmann, Robert F., Kansas City
Wotawa, William J., St. Louis
Wray, R. B., Nevada
Wright, Robert P., Kansas City
Wu, William Q., Kansas City
Wulff, George J. L., Jr., University City

Wurzer, Arnold H., St. Louis
Wyatt, Lois C., Kirkwood
Wyloge, Elliott I., St. Louis

Y

Yaeger, Gerald A., St. Louis
Yancey, Daniel L., Springfield
Yanow, Mitchell, Clayton
Yarbrough, William C., St. Louis
Yazel, Herman E., Kansas City
Yore, Richard W., Seattle, Wash. (Member St. Louis Medical Society)
York, William B., Sarcoxie
Yoskit, Harry, Festus
Yost, Paul W., St. Louis
Yost, Walter B., University City
Young, James E., Kansas City
Young, Jesse W., Kansas City, Kansas (Member Jackson County)
Young, John S., St. Louis
Young, Leo P., St. Louis
Young, Lillian V., Redlands, Calif. (Member St. Louis Medical Society)
Young, Robert H., Moberly
Younge, Walter A., St. Louis
Younger, Anita, St. Louis
Younger, Ernest, St. Louis
Younger, Jesse, St. Louis
Youngman, George A., St. Louis

Z

Zahorsky, John, Steelville (Member St. Louis Medical Society)
Zahorsky, Theodore S., St. Louis
Zeffren, Joel L., St. Louis
Zeinert, Oliver B., University City
Zeitler, Walter A., Jennings
Zeitler, William T., St. Louis
Zellermayer, Jacob, Kansas City
Zentay, Paul J., St. Louis
Ziegelmeyer, John S., St. Louis
Ziegler, Allen M., Kansas City
Ziegler, William H., Boonville
Zillgitt, George H., St. Louis
Zimmerman, Joseph A., Kennett
Zimmermann, Carl A. W., Cape Girardeau
Zingale, Frank G., St. Louis
Zink, Oscar C., Clayton
Zoglin, Nathan, Kansas City
Zuber, Harold V., Kansas City
Zwart, Claude H., St. Louis

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

ACCIDENT, HOSPITAL AND SICKNESS INSURANCE

For Physicians, Surgeons, Dentists Exclusively

$5,000 accidental death Quarterly $8.00 $25 weekly indemnity, accident and sickness	$15,000 accidental death Quarterly $24.00 $75 weekly indemnity, accident and sickness
$10,000 accidental death Quarterly $16.00 $50 weekly indemnity, accident and sickness	$20,000 accidental death Quarterly $32.00 $100 weekly indemnity, accident and sickness

Cost Has Never Exceeded Amounts Shown

ALSO HOSPITAL INSURANCE

	Single	Double	Triple	Quadruple
60 days in Hospital	5.00 per day	10.00 per day	15.00 per day	20.00 per day
30 days of Nurse at Home	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
X-Ray in Hospital	10.00	20.00	30.00	40.00
Medicines in Hospital	10.00	20.00	30.00	40.00
Ambulance to or from Hospital	10.00	20.00	30.00	40.00
COSTS (Quarterly)				
Adult	2.50	5.00	7.50	10.00
Child to age 19	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

$4,000,000.00 INVESTED ASSETS

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

$19,500,000.00 PAID FOR CLAIMS

51 years under the same management

400 First National Bank Building Omaha 2, Nebraska

$200,000.00 deposited with State of Nebraska for protection of our members

List of Members by County

ADAIR COUNTY
(North Central Counties Medical Society)

ANDREW COUNTY MEDICAL SOCIETY

Holliday, Morgan Lee, Fillmore
Kelley, Gilbert B., Savannah
Kelley, Ralph R., Savannah
Long, Forrest C., Savannah
Wilson, Virgil R., Rosendale

ATCHISON COUNTY
(Nodaway-Atchison-Gentry-Worth County Medical Society)

AUDRAIN COUNTY MEDICAL SOCIETY

Bland, Warren W., Vandalia
Coil, Paul E., Mexico
Dwyer, Thomas L., Mexico
Ector, Henry Joseph, Mexico
Gantt, Ernest S., Jr., Mexico
Garcia, Charles L., Mexico
Harrison, John Frank, Mexico
Jolley, J. Frank, Mexico
Kallenbach, G. P., Mexico
Lankford, Harold D., Mexico
McCall, William K., Laddonia
O'Brien, Harry F., Mexico
Williams, Robert Sidney, Mexico

BARRY COUNTY
(Ozarks Medical Society)

BARTON-DADE COUNTY MEDICAL SOCIETY

Arnold, Herbert M., Lamar
Bickel, James T., Lamar
Bickel, Vern T., Lamar
Cain, Alvin R., Lamar
Duckett, Claude E., Lamar
Guldner, Edmond, Lamar
Heilbrunn, Max, Lockwood
Knapp, Rudolf, Golden City
Locker, George E., Iantha
McNeel, Lee A., Jr., Greenfield

BATES COUNTY
(West Central Counties Medical Society)

BENTON COUNTY MEDICAL SOCIETY

Glenn, David H., Warsaw
Logan, James A., Warsaw
Reser, Thomas S., Cole Camp

BOLLINGER COUNTY
(Unorganized)

BOONE COUNTY MEDICAL SOCIETY
(Columbia)

Allee, James W., Columbia Professional Bldg.
Allen, Horace E., 1 West Broadway
Allen, Jerry H., 1324 S. Fairway Terrace Springfield
Allen, Joseph E., Ellis Fischel Hospital
Asel, Norman D., Medical Corps, Camp Carson, Colo.
Atkins, James A., 506 Cherry St.
Baker, James M., 16 S. 10th St.
Baskett, Edgar D., 16 S. 10th St.
Battersby, Richard S., 113 Westwood
Bradford, Oscar F., 205 Exchange National Bank Bldg.
Bruner, Claude R., Exchange National Bank Bldg.
Chalkley, Judson I., Professional Bldg.
Chiasson, E. Chaille, Human Relations Center, 412 Guitar Bldg.
Conley, Dudley S., 17 Bingham Rd.
Cooper, Maurice E., 8 Wayne Rd.
Cope, James C., Columbia Professional Bldg.
Darnell, Thomas F. B., 909 University Ave.
Dietrich, Karl D., Professional Bldg.
Edmondson, Paul J., 101 W. Singleton, Centralia
Etheredge, Maude Lee, 18 Clinton Dr.
Garrett, Glen H., Columbia Professional Bldg.
Griffith, Harry M., Camdenton
Hall, John, Ashland
Hardwicke, Henry, Address Unknown
Johnson, Richard E., Ellis Fischel Hospital
Kampschmidt, August W., Address Unknown
Lachance, Leopold, Centralia
Ladenson, Roland P., 16 S. 10th St.
Lamke, Charles M., Columbia Professional Bldg.
Leech, Charles A., 417 Guitar Bldg.
Leeper, Claude K., University of Missouri School of Medicine
McComas, Arthur R., Sturgeon
McElroy, Glenn L., 909 University Ave.
Miller, Leroy J., Guitar Bldg.
Modlin, John J., 220 Edgewood Ave.
Neal, M. Pinson, University of Missouri School of Medicine
Nifong, Frank G., Route No. 1
Overholser, Milton D., University of Missouri School of Medicine
Rodgers, Elrie P., 101 W. Broadway
Scheuber, Charles, Professional Bldg.
Schwarz, Henry, II, 917 Harden St.
See, William B., Professional Bldg.
Simpson, Lloyd, Miller Bldg.
Smith, Gladys C., Address Unknown
Smith, Stephen D., 1404 E. Broadway
Stewart, William J., 909 University Ave.
Stine, Dan G., 22 N. 8th St.
Suggett, Finis C., 805 Broadway
Sweets, Henry H., Jr., 909 University Ave.
Thomas, Helen E., 417 S. Garth Ave.
Thomas, Horace E., 909 University Ave.
Tinsley, John C., Jr., Ellis Fischel Hospital
Trimble, George X., University Hospital
Waggoner, Charles M., Columbia Professional Bldg.
Washington, Edw. Lee, 909 University Ave.
Wendell, Margaret R., Stephens College Health Center
Windmiller, Myrl E., Exchange Bank Bldg.

BUCHANAN COUNTY MEDICAL SOCIETY
(St. Joseph)

Allaman, John M., 216 Physicians & Surgeons Bldg.
Almada, Albert A., Stockton State Hospital, Stockton, Calif.
Ames, William H., 902 Edmond St.
Beck, Leroi, 1618 N. Third St.
Bell, John M., 3004 Olive St.
Benson, Scott C., 510 Corby Bldg.
Berney, Francis J., 1225 N. 10th St.
Biggins, Cloice H., 1302 Faraon
Boteler, George M., Mental Health Institute, Box 338, Clarinda, Iowa
Bristow, Robert B., Physicians & Surgeons Bldg.
Brooker, R. M., University of Kansas Medical Center, Kansas City, Kansas
Brumm, Harold J., P. O. Box 747
Buck, Ronald, P. O. Box 747
Butler, E. F., R. No. 2, Carrollton
Carle, H. W., Jr., Physicians & Surgeons Bldg.
Carpenter, George T., 902 Edmond St.
Chiarottino, Joseph F., 1302 Faraon
Conrad, Robert W., 404 Tootle Bldg.
Craig, Owen W. D., 405 Tootle Bldg.
Dawson, Orville L., 317 Kirkpatrick Bldg.
Day, Maxwell, 2023 Hutton Dr., Nashville, Tenn.
DeLamater, Hasbrouck, 101 S. 19th St.
DuMont, Clement C., 1905 Francis St.
Eliscu, Fred, 212 S. 17th St.
Elliott, John R., 801½ Francis St.
Ferguson, Luther J., 723½ Felix
Fisher, Joseph L., 824 Edmond St.
Fordyce, Claude P., 2522 Mulberry St.
Forgrave, John R., 420 N. 8th St.
Forgrave, Leon P., 420 N. 8th St.
Forman, George W., P. O. Box 747
Fuller, Charles D., Norton, Va.
Fuson, Levi H., Kirkpatrick Bldg.
Grant, Claude S., 1302 Faraon St.
Greenberg, Charles, Physicians & Surgeons Bldg.
Grimes, M. E., Kirkpatrick Bldg.
Handler, Eric, Physicians & Surgeons Bldg.
Hansen, Walter J., 2802 Jule St.
Hartigan, Frank X., 2232 Eugene Field
Herman, Allen I., 301 Physicians & Surgeons Bldg.
Howden, Thomas L., 407 Kirkpatrick Bldg.
Hughes, Judson M., Kirkpatrick Bldg.
Hull, Walter S., Faucett
Hunt, William J., 314 Schneider Bldg.
Ide, Lucien W., P. O. Box 747
Kieber, Robert W., Physicians & Surgeons Bldg.
Kirk, John S., 306 Physicians & Surgeons Bldg.
Knepper, P. A., Box 747
Kulowski, Jacob, 415 Corby Bldg.
Lau, Gustav A., 217 Kirkpatrick Bldg.
McCann, Louis P., New London
McDaniels, John R., 902 Edmond St.
McDonald, Wilbur P., 301 N. 8th St.
McGlothlan, Arthur B., 824 Edmond St.
Meluney, S. E., 214 Kirkpatrick Bldg.
Miller, Eugene A., 1400 N. 25th St.
Miller, Jack G., 309 Kirkpatrick Bldg.
Minton, Robert S., 705 Corby Bldg.
Minton, William H., 705 Corby Bldg.
Moen, Berwyn H., 902 Edmond St.
Morroway, James H., State Hospital No. 2
Morse, Marvin, 2702 Faraon
Muench, Albert H., 215 Physicians & Surgeons Bldg.
Mullinax, Orr, State Hospital No. 2
Mundy, Homer F., 404 S. Third St.
Ness, Carl K., 902 Edmond St.
O'Connor, William B., 319 Kirkpatrick Bldg.
O'Donoghue, James, P. O. Box 747
Paul, Thomas M., 201 Physicians & Surgeons Bldg.
Petersen, H. E., 212 Kirkpatrick Bldg.
Potter, Thompson E., 731 Faraon St.
Redmond, William, 411 Corby Bldg.
Riddell, Richard V., 902 Edmond St.
Rosenthal, Irwin I., 2715 Union
Rost, William B., 3113 Renick St.
Roundy, Collis I., Kirkpatrick Bldg.
Ryan, John H., 301 N. 8th St.
Saferstein, T. Harry, 2903 Sherman
Sauer, Gordon C., 902 Edmond St.
Schertz, Truman B., 902 Edmond St.
Senne, Herbert C., Physicians & Surgeons Bldg.
Senor, Samuel D., 722½ Francis St.
Senor, Samuel E., 722½ Francis St.
Shevlin, Charles F., 902 Edmond St.
Simmons, Benjamin B., 801½ Francis St.
Smith, Andrew J., Physicians & Surgeons Bldg.
Smith, Clifton, 2502 Faraon St.
Spencer, Floyd H., 404 Kirkpatrick Bldg.
Stacy, Winton T., APO 46 c/o P. C., New York, N. Y.
Stamey, James T., 2624 St. Joseph Ave.
Tadlock, Baxter W., 703 S. 13th St.
Tahir, Mohammad, 228 Illinois Ave.
Thomas, Forrest, State Hospital No. 2
Thompson, F. G., Jr., P. O. Box 747
Timerman, Arthur R., 234 Illinois Ave.
Wadlow, Ernest E., Kirkpatrick Bldg.
Waggoner, Sharon E., 301 Illinois Ave.
Whitsell, John C., 1207 Francis St.
Whitsell, Ora E., 824 Edmond St.
Willumsen, Henry C., P. O. Box 747
Wisser, John J., 2740 Mitchell Ave.

BUTLER-RIPLEY-WAYNE COUNTY MEDICAL SOCIETY

Biggs, Fred J., Poplar Bluff
Brandon, Walter L., Poplar Bluff
Brookreson, Alton F., Poplar Bluff
Canlas, Emilio M., Poplar Bluff
Clay, Hampson S., Poplar Bluff
Cline, Edward W., Poplar Bluff
Dinelli, Frank E., Poplar Bluff
Ellis, Elizabeth H., V.A. Hospital, North Little Rock Ark.
Ellis, Ralph V., 6415 Longwood Rd., Little Rock, Ark.
Engelhardt, Robert C., Poplar Bluff
Fonda, James W., Poplar Bluff
Gernstetter, Sangwill L., Poplar Bluff
Harwell, J. Lester, Poplar Bluff
Harwell, James Lee, Poplar Bluff
Henrickson, H. O., Poplar Bluff
Henrickson, Hardin M., Poplar Bluff
Henrickson, William E., Poplar Bluff
Johnson, Frank C., Doniphan
Kneibert, Fred L., Poplar Bluff
Loughead, John R., Poplar Bluff
McPheeters, James W., Poplar Bluff
McPheeters, J. W., Jr., Poplar Bluff
Macauley, Bernard J., Poplar Bluff
Malinoski, Mitchell V., Poplar Bluff
Markel, Arthur D., Poplar Bluff

Parker, A. C., Jr., Poplar Bluff
Post, Cyril A., Poplar Bluff
Rowe, Alfred R., Poplar Bluff
Spaulding, William, Poplar Bluff
White, Homer E., Naylor
Williams, James E., Doniphan
Willis, Norman E., Poplar Bluff

CALDWELL COUNTY
(Grand River Medical Society)

CALLAWAY COUNTY MEDICAL SOCIETY

Blasko, John J., Vermont Ave. & H. St. N.W., Washington, D. C.
Brown, John J., Fulton
Caldwell, James C., Fulton
Cremer, William J., Fulton
Crews, Robert N., Fulton
Durst, Henry, Box 126, Caraway, Ark.
Fowler, J. Henry, Fulton
Gish, Rutledge, Fulton
Glotfelty, Wayne, 3001 Fifth Ave., Richmond, Va.
Hall, Robert G., Nevada
Hanks, Ralf, Fulton
Hunter, James R., Fulton
Lanier, Andrew S., Fulton
Lanier, Patricia F., Fulton
McCubbin, J. Burleigh, Fulton
Nichols, Frank J., Mokane
Price, Robert P., Fulton
Rusk, Earl McD., New Bloomfield
Williamson, Wm. H., Mokane
Wood, George F., Fulton

CAMDEN COUNTY MEDICAL SOCIETY

Claiborne, Edw. G., Camdenton

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY
(Cape Girardeau)

Ashley, Hugh, Jr., 711a Broadway
Ashley, Hugh V., 711 Broadway
Barnes, Seth S., 1854 Broadway
Blaylock, Richard D., Oak Ridge
Campbell, Edward D., 701a Good Hope St.
Cook, Norman L., St. Francis Hospital
Crites, Edward, Sedgewickville
Crowe, John T., Farmers & Merchants Bank Bldg.
Davault, Webster W., Delta
Drace, James J., P. O. Box 154
Elrod, Dennis B., 1912 Broadway
Estes, Albert M., 714 Broadway
Ford, Walter W., Gordonville
Fuerth, Arthur L., Hirsch Bldg.
Hall, Frank W., 826 Themis St.
Herbert, Charles T., 824 Good Hope St.
Jaeger, Joseph N., 208 S. High St., Jackson
Juden, Alexander G., 714 Good Hope St.
Keim, John H., 801a Broadway
Kinder, James A., 826 Themis St.
Kollar, Charles S., 268 Godwin, Ridgewood, N. J.
McDonald, Eugene F., 125a Court St., Jackson
Nussbaum, Paul B., 704 Broadway
Oehler, William F., 234 N. Middle St.
Otto, Thomas G., 1912 Broadway
Reynolds, Garland A., 826 Themis St.
Ridings, Harold D., 1858 Broadway
Ritter, Raymond A., St. Johns Hospital
Ruff, Troy E., V. A. Hospital, Little Rock, Ark.
Schulz, Gustav B., 605 Broadway
Seabaugh, D. Rusby, 801a Broadway
Seabaugh, Dayton I. L., 106 E. 1st North, Jackson
Seabaugh, L. R., 801a Broadway
Seabaugh, Oda L., 720 South Blvd.
Seabaugh, William O. L., 24 N. Sprigg
Shelby, Mitchell H., 726 Themis St.
Shoss, Milton, St. Francis Hospital
Sutton, Charles E., 6 S. Fountain
Trolinger, J. H., 122 S. High St., Jackson
Tygett, Glenn J., 215 N. Sprigg St.
Wescoat, William H., 318 Broadway
Wilson, Charles F., 714 Broadway
Wolff, Paul G., 727 Broadway
Zimmermann, Carl A. W., Oakwold, Cape Girardeau

CARROLL COUNTY
(Grand River Medical Society)

CARTER-SHANNON COUNTY MEDICAL SOCIETY

Cotton, Tolman W., Van Buren
Davis, Robert I., Birch Tree
Rollins, H. D., Winona

CASS COUNTY
(West Central Counties Medical Society)

CEDAR COUNTY
(West Central Counties Medical Society)

CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

Baker, Josephine D., Moberly
Barnett, Floyd A., Paris
Buck, Ulysses G., Rothville
Campbell, James E., Macon
Chute, W. Deward, Moberly
Cohrs, Clarence C., Moberly
Dreyer, Philip V., Huntsville
Eggleston, Donald E., Macon
Erni, Harry E., Macon
Fellows, William W., Veterans Hospital, Albany, N. Y.
Fleming, Jacob W., Jr., Moberly
Fleming, Thomas S., Moberly
Hardy, John W., Sumner
Harms, Florian L., Salisbury
Hawkins, George W., Salisbury
Huber, Lasley E., Moberly
Hyatt, William T., 3805 S. Broadway, St. Louis
Johnson, Edward M., Macon
Knapp, Mark R., H.Q. 52-4 Medical Group, Eglin AFB, Florida
Lewis, Andrew L., Sumner
Lucas, Wm. B., Mendon
McAdam, James D., Address Unknown
Megee, William K., Moberly
Miller, D. Herbert, Veterans Hospital, Muskogee, Okla.
Miller, Howard S., Macon
Newton, Henry O., LaPlata
Petty, Wallace S., Macon
Ragsdale, George M., Paris
Rice, Grover C., Brunswick
Rowlette, A. P., Moberly
Smith, Carl C., Moberly
Streetor, Roderick D., 1332 Blackstone Ave., St. Louis
Stuart, Daniel D., Brunswick
Szymanski, Stanley R., Moberly
Weger, Carl C., Keytesville
West, William D., Address Unknown
Young, Robert H., Moberly

CHRISTIAN COUNTY
(Ozarks Medical Society)

CLARK COUNTY
(Lewis-Clark-Scotland County Medical Society)

CLAY COUNTY MEDICAL SOCIETY

Andrews, Berneie W., North Kansas City
Baird, J. Edward, Excelsior Springs
Chastain, Maurice W., 1908 Erie, North Kansas City
Dawson, Lerton V., Excelsior Springs
Dunham, R. H., North Kansas City
Dwyer, Reinhardt D., North Kansas City
Edwards, Theodore F., North Kansas City
Fisher, Edward H., North Kansas City
Fowler, I. Charles, North Kansas City
Gay, Elmer E., Richmond
Goodson, William H., Liberty
Hardegree, Harvey, Nichols Vet. Admin. Hospital, Louisville, Ky.
Hendren, Glenn W., Liberty
Hobbs, Earl B., Smithville
Hodge, Robert H., North Kansas City
Horton, Ray B., North Kansas City
Houck, Russell M., V. A. Hospital, Richmond, Va.
Knox, Earl R., Highway 169, North Oak Traffic Way, Kansas City
Langhus, Melvin O., North Kansas City
McCormick, James E., North Kansas City
McCracken, Samuel R., Excelsior Springs
Mullins, Bernard L., North Kansas City
Musgrave, David E., Excelsior Springs
Novota, Otto J., Smithville
Parker, Robert H., North Kansas City
Pate, O. S., North Kansas City
Porter, Russell C., North Kansas City
Robichaux, Eugene B., Excelsior Springs
Robichaux, Eugene C., Excelsior Springs
Sanders, George E., Excelsior Springs
Schroeder, Sidney O., Liberty
Seidel, Joshua, Excelsior Springs
Spelman, Archibald E., Smithville
Sprong, Aaron A., Excelsior Springs
Tripodi, Donald W., Excelsior Springs
Washburn, Walter L., North Kansas City
Waterman, F. M., Liberty
Willoughby, James W., Liberty
Withrow, John B., North Kansas City

CLINTON COUNTY MEDICAL SOCIETY

Kimes, Ira D., Cameron
Longfield, Fred J., Lathrop
Luckenbill, Paul T., Plattsburg
Netherton, George F., Cameron
Spalding, Wilber B., Plattsburg
Wilbur, Ronald E., Cameron

COLE COUNTY MEDICAL SOCIETY
(Jefferson City)

Belden, Edgar A., State Office Bldg.
Bohrer, Edward R., 322 Jefferson St.
Bruce, James G., 234 Madison St.
Cox, William A., 125 E. High St.
Dorris, Richard P., Trust Bldg.
Enloe, L. David, Trust Bldg.
Exon, C. Stuart, 503 E. High St.
Garner, Lynn M., State Division of Health
Gillham, Frank W., Trust Bldg.
Guhleman, Henry V., Jr., 506 East High St.
Gurnee, Landon H., 301 Central Trust Bldg.
Kanagowa, H., Dallmeyer Bldg.
Kelly, Marshall W., 507 E. High St.
Klebba, Larry B., 712 W. High St.
Leslie, J. Paul, Central Trust Bldg.
Leslie, J. T., 933 Fairmount
Leslie, Walter L., Russellville
Loyd, Earl L., 425 Madison St.
McHaney, John W., Trust Bldg.
McKnelly, William von, 1111 Moreau Dr.
Mansur, Edward E., 3617 N.W. 36th St., Miami, Fla.
Matthews, John I., 425 Madison St.
Maxey, Hugh W., 626a Jefferson St.
Meier, F. X., 507 E. High St.
Meinershagen, Charles W., 138 Forest Pl.
Ossman, Julian A., 2030 W. Main St.
Richardson, R. G., 421 Lafayette
Sennott, John S., 507 E. High St.
Shull, George D., 229a E. High St.
Stauffer, Harry B., Central Trust Bldg.
Stephan, August P., 98 W. Circle Dr.
Stricker, Harold C., 21 Hobbs Terrace
Sugarbaker, Everett D., 2313 W. Main, Orchard Acres
Summers, Joseph S., Trust Bldg.
Summers, Joseph S., Jr., 114 W. Circle Dr.
Tanner, Robert H., 131 E. High St.
Taylor, Herbert I., 111 E. Circle Dr.
Taylor, Leon A., 129 E. High St.
Watts, Byron E., 234 Madison Ave.

COOPER COUNTY MEDICAL SOCIETY

Beckett, Theodore C., Boonville
Boley, James O., 3200 E. Meyer Blvd., Kansas City
Chamberlain, Gilbert L., New Franklin
Diekroeger, Manuel L., Boonville
Huelsmann, Donald, Boonville
Humphreys, Edw. T., Boonville
Lewis, Ray B., Boonville
Paine, William G., Boonville
Sandy, Charles, Prairie Village, Kansas
Stone, William E., Boonville
Stuart, Byron M., Boonville
Suarez, Nelson, Slater
Tincher, Joseph C., Boonville
Wilcox, Howard L., Boonville
Winn, George W., Boonville
Ziegler, Wm. H., Boonville

CRAWFORD COUNTY
(Phelps-Crawford-Dent-Pulaski-Maries County Medical Society)

DADE COUNTY
(Barton-Dade County Medical Society)

DALLAS-HICKORY-POLK COUNTY MEDICAL SOCIETY

Barnett, C. H., Bolivar
Brooks, John M., Diamond
Glasco, Loren A., Urbana
Griffin, Evelyn, Buffalo
Griffin, Olin A., Jr., Buffalo

Harrell, Henry J., Morrisville
McCraw, Doyle C., Bolivar
Plummer, Grover C., Buffalo
Robinson, George G., Humansville

DAVIESS COUNTY
(Grand River Medical Society)

DEKALB COUNTY
(Grand River Medical Society)

DENT COUNTY
(Phelps-Crawford-Dent-Pulaski-Maries County Medical Society)

DOUGLAS COUNTY
(South Central Counties Medical Society)

DUNKLIN COUNTY MEDICAL SOCIETY

Bailey, S. M., Box 487, St. Simon Island, Ga.
Baldwin, Paul, Kennett
Beal, Homer, Malden
Bell, Exter F., Jr., 3720 Jardin St., Houston, Texas
Belsey, Wallace A., Campbell
Bond, Van H., Hornersville
Cofer, James C., Kennett
Dempsey, D. T., Kennett
Dunmire, George Q., Kennett
Edmondson, Charles T., Malden
English, Wallace D., Cardwell
Green, Robert S., Kennett
Hopkins, F. G., Gideon
Linton, C. S., Kennett
Miltenberger, Paul C., Kennett
Mitchell, Samuel E., Malden
Mohler, Elbert M., Jr., Senath
Park, William E., Cardwell
Peck, Chester R., Jr., Kennett
Rutledge, William J., Campbell
Speidel, Frederick W., Senath
Spence, Elbert L., Kennett
Tarver, Quinton, Kennett
Van Cleve, John D., Malden
Williams, Charles S., Malden
Wilson, Loys C., Kennett
Zimmerman, Jos. A., Kennett

FRANKLIN-GASCONADE-WARREN COUNTY MEDICAL SOCIETY

Andreassen, Dimil F., Sullivan
Bozzo, Raymond J., Washington
Brenner, Paul A., Owensville
Briegleb, Chas. F., 2570 Berwyn Rd., Columbus, Ohio
de la Torre, John J., Sullivan
Denny, Hubert M., Union
Ecker, Decider B., Pacific
Eisenmann, Benj. P., New Haven
Hoelscher, Harold F., Warrenton
Johnson, Grover C., Marthasville
Keller, Robert M., Owensville
Kitchell, Wm. E., St. Clair
Matthews, Gilpin L., Beaufort
Mayfield, James L., Washington
Mays, Frank G., Washington
Muench, Ludwig O., Washington
Pearl, John F., St. Clair
Pletcher, K. E., U. S. Embassy, London W.I., England
Proctor, Carter A., Sullivan
Richardson, Wm. R., Union
Royse, Roy P., Sullivan
Ryan, John B., Hermann
Schmidt, Charles A., Washington
Schmidt, Herbert H., Washington
Schwartz, Alfred J. C., Washington
Shaw, Carvel T., Hermann
Steinbeck, Herbert D., Union
Strehlman, Benjamin G., Union
Wepprich, Michael S., Washington

GASCONADE COUNTY
(Franklin-Gasconade-Warren County Medical Society)

GENTRY COUNTY
(Nodaway-Atchison-Gentry-Worth County Medical Society)

GRAND RIVER MEDICAL SOCIETY
(Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb County Medical Society)

Allen, Erroll W., Carrollton
Atwood, J. Morris, 2916 W. 72nd St., Prairie Village, Kansas
Atwood, Wm. G., Carrollton
Bales, Eugene L., Carrollton
Berry, Paul T., Marceline
Bohnsack, Ralph W., Brookfield
Booth, Herbert R., Hamilton
Breid, Jacob, Spickard
Brennan, Raymond J., Chillicothe
Brewer, Lake, Ridgeway
Bristow, Arthur S., Princeton
Bristow, George B., Beale Air Force, Base Hospital, Marysville, Calif.
Brownfield, Samuel T., Brookfield
Broyles, Watkins A., Bethany
Carpenter, George W., Chillicothe
Carter, Howard, Browning
Clark, Chester Lee, Trenton
Collier, Alfred, Chillicothe
Conrad, Joseph, Chillicothe
Cullers, Charles H., Trenton
Daley, Frank R., Hamilton
Dixon, John R., Brookfield
Dowell, Donald M., Chillicothe
Dowell, Horace S., Chillicothe
Duffy, Edgar A., Trenton
Duffy, Oliver F., Trenton
Ellis, Wm. W., Marceline
Fuson, William A., Trenton
Gale, Joseph F., Chillicothe
Gearhart, M., Bethany
Grace, Charles M., Chillicothe
Groce, Nathan W., Address Unknown
Haley, Roy R., Brookfield
Haskell, Ralph E., Norborne
Johnson, Glenn D., Maysville
Kadel, Merle A., Brookfield
Kimberlin, Herbert C., Trenton
Lambert, Marian, Princeton
Lee, Leonard R., Bethany
Lowry, Henry L., Tindall
Lucas, John H., Brookfield
McArtor, Thomas R., Browning
Mairs, Edgar J., Trenton
Mandler, George, Chillicothe
Nixon, Edward E., Gallatin
Olson, Edwin T., Brookfield
Parker, John Z., Pattonsburg
Perry, John M., Princeton
Pickett, Clarence P., Princeton
Platz, John H., Carrollton
Quisito, Joseph M., Trenton
Reed, Carl H., Carrollton
Sellers, C. J., Mt. Moriah
Smith, Robert W., Marceline
Staton, R. Hamilton, Carrollton
Sweiger, James H., Maysville
Thompson, Emma A. B., Columbia
Vandiver, Virgil D., Chillicothe
Webb, J. W., Breckenridge
Weston, Ursa C., Galt
Wilbur, Clifford H., Polo
Wilson, Fred K., Winston

GREENE COUNTY MEDICAL SOCIETY
(Springfield)

Amos, James R., 820 E. Elm St.
Anthony, Dallas, Professional Bldg.
Ashley, Thomas E., 1365 S. Kansas St.
Atherton, Mary Jean, McDaniel Bldg.
Barber, John J., Address Unknown
Beatie, William R., 511 Normal St.
Bechtold, Frederick F., 120 Brown St., Little Rock Ark.
Boots, Roger H., Medical Arts Bldg.
Box, Earnest M., 412 E. Commercial St.
Brown, Lyman D., 307½ College St.
Bruton, Tyrrel S., Woodruff Bldg.
Burke, Walter H., Woodruff Bldg.
Busiek, Paul J., 303 Professional Bldg.
Busiek, Urban J., 303 Professional Bldg.
Callaway, Guy D., 801 S. Kickapoo St.
Callaway, Guy D., Jr., 205 E. St. Louis
Clarke, Michael J., Morton Bldg.
Clayton, Edgar L., 300 Medical Arts Bldg.
Coffelt, Kenneth C., 800 Medical Arts Bldg.
Coller, Frederick C., 1211 S. Pickwick St.
Conrad, Raymond C., 609 Cherry St.
Craig, Arthur D., 1046 E. Delmar St.
Crawford, Oral B., 348 Medical Arts Bldg.
Delzell, William A., 410 McDaniel Bldg.
Dietz, M. Wendell, Burge Hospital
Dills, Joseph N., 609 Cherry St.
Dimond, Edgar A., 1514 Fairway Dr.
Duncan, Robert D., 302 Professional Bldg.
Elkins, Ronald F., 402 Professional Bldg.
Ellis, Francis J., 304 Professional Bldg.
Epps, Curtis, 800 Medical Arts Bldg.
Esch, John G., Republic
Evans, Ezra L., 609 Cherry St.
Evans, Ezra L., Jr., Professional Bldg.
Farthing, Fred R., 1234 E. Walnut St.
Farthing, Gene W., Medical Arts Bldg.
Feller, C. E., 609 Cherry St.
Ferguson, John P., Jr., 1219 S. Clay St.
Ferrell, Thomas E., Jr., Professional Bldg.
Fessenden, Ersel M., 634 Kingsbury St.
Fitch, C. H. Max, 1711 Boonville St.
Focht, Ralph H., Strafford
Freeman, Hal E., 631 Cherry St.
Fulbright, James H., 1033 E. Walnut St.
Gentry, Merritt L., 432 Medical Arts Bldg.
Glenn, Elmer E., 1643 E. Catalpa St.
Glynn, Robert, 500 Holland Bldg.
Good, James T., Holland Bldg.
Gorelick, David F., 1041 Linwood Terr.
Gose, Don Ferrell, Professional Bldg.
Hall, Durward G., 500 Holland Bldg.
Hanan, Ernest B., 675 S. Kickapoo St.
Hansbro, Gerald L., 43rd Surgical Hosp. MA APO 301 c/o P.M., San Francisco, Calif.
Hanss, Armand W., Medical Arts Bldg.
Harris, Thomas S., 1300 Josephine St., Denver, Colo.
H'Doubler, Francis T., 406 Professional Bldg.
H'Doubler, Francis T., Jr., 406 Professional Bldg.
Heimburger, Leroy F., Medical Arts Bldg.
Hogeboom, George W., 208 Professional Bldg.
Hoover, H. Lee, Jr., 208 Professional Bldg.
Horst, Otto C., Medical Arts Bldg.
Horton, James D., 405 Professional Bldg.
Huffman, Elston R., V. A. Hospital, Denver, Colo.
James, Joseph D., 304 Professional Bldg.
Johnson, L. G., Medical Arts Bldg.
Johnson, Warford B., 304 Medical Arts Bldg.
Johnson, William F., 500 Medical Arts Bldg.
Johnston, Joseph L., 1919 S. Jefferson
Klingner, George M., R No. 3, Box 1284
Knabb, Arthur D., 1630 N. Jefferson St.
Knabb, Harris, 450½ E. Commercial St.
Knabb, Henry F., 440½ E. Commercial
Knabb, Henry F., Jr., 1630 N. Jefferson St.
Knabb, Kenneth E., 1630 N. Jefferson St.
Langston, Walter R., 408 Professional Bldg.
Leidinger, Karl J., Republic
Lemmon, George B., 1101 E. Walnut St.
Lemmon, G. Bruce, Jr., 407 Professional Bldg.
Leslie, James F., 222½ E. Commercial St.
Lockhart, Charles E., 432 Medical Arts Bldg.
Lowe, Horace A., 700 Medical Arts Bldg.
Lowe, Horace A., Jr., 342 Medical Arts Bldg.
Lurie, Harold H., 1425 Hart St.
Maddux, William P., 209 Professional Bldg.
Maher, Robert W., Medical Arts Bldg.
Marcus, Edward, Woodruff Bldg.
Marshall, Homer C., Professional Bldg.
Marshall, W. J., 305 Professional Bldg.
Meyer, Claude B., 410 McDaniel Bldg.
Morton, Paul C., 1508 E. Stanford St.
Musick, James D., Medical Arts Bldg.
Napper, Marvin L., Medical Arts Bldg.
O'Brien, James A., R. No. 4, Box 10, Rogers, Ark.
Orr, Charles H., Ash Grove
Park, William I., Jr., 209 Professional Bldg.
Peterson, Stanley S., 500 Holland Bldg.
Pickens, E. Allen, 432 Medical Arts Bldg.
Plumlee, William C., 511 Holland Bldg.
Pope, Nathan K., 221½ E. Commercial St.
Powell, Edwin M., Professional Bldg.
Rainwater, E. H., 922 Meadowmere
Rigney, Levi M., S.S.Sta. Box 1428
Rosen, Max, Medical Arts Bldg.
Sartin, John M., Medical Arts Bldg.
Schwartz, Eugene J., 301 Professional Bldg.
Schweitzer, Fred C., Jr., Woodruff Bldg.
Sewell, Walter S., Professional Bldg.
Siceluff, Joseph G., 609 Cherry St.
Silsby, Don H., 326 Landers Bldg.
Silsby, Don James, 303 McDaniel Bldg.
Silsby, Harry D., 208 Professional Bldg.
Simpson, Emerson L., 222½ E. Commercial St.
Smith, C. Souter, 513 Holland Bldg.
Snead, William H., Jr., 607 Medical Arts Bldg.
Stahl, Fred A., 307 Woodruff Bldg.
Stewart, R. Wendell, 203 Professional Bldg.
Tarrasch, E. L., Woodruff Bldg.

Taylor, William E., Southwest Missouri State College
Tillman, Walter W., Jr., 405 Medical Arts Bldg.
Turner, Glenn O., 307 Professional Bldg.
Upshaw, Paul O., Medical Arts Bldg.
Vail, A. Denton, 407 Professional Bldg.
Vinyard, Robert, 700 Medical Arts Bldg.
Wakeman, Jasper N., 626 Woodruff Bldg.
Walsh, William T., P. O. Box 144, Kingwood, W. Va.
Webb, Leslie R., 1254 E. Meadowmere
Webb, Leslie R., Jr., 401 Professional Bldg.
White, R. Ned, 205 Professional Bldg.
Williams, John W., 201 Professional Bldg.
Williams, John W., Jr., 710 Landers Bldg.
Williams, Robert F., 710 Landers Bldg.
Wood, William W., 1331 Fourth Ave., S.E., Rochester, Minn.
Wooldridge, W. E., 100 Professional Bldg.
Yancy, Daniel L., 500 Holland Bldg.

GRUNDY COUNTY
(Grand River Medical Society)

HARRISON COUNTY
(Grand River Medical Society)

HENRY COUNTY MEDICAL SOCIETY

Baggerly, Walter E., Montrose
Blackmore, Thomas A., Windsor
Douglas, Thomas H., Jr., Osceola
Hollingsworth, Ray S., Clinton
Hughes, Shelby B., Clinton
Jennings, Robert J., Windsor
Jordan, Ray B., Windsor
Smith, James O., Clinton
Thurber, Claude M., Windsor
Walker, George S., Clinton
Walker, Hugh B., Clinton
Wall, Harvey M., Windsor
Woltzen, Samuel W., Urich

HICKORY COUNTY
(Dallas-Hickory-Polk County Medical Society)

HOLT COUNTY MEDICAL SOCIETY

Hogan, Frank E., Mound City
Kearney, Elmer F., Oregon
Perry, David C., Mound City
Sweaney, Isaac F., Oregon

HOWARD COUNTY MEDICAL SOCIETY

Allen, William C., Glasgow
Bloom, W. A., Fayette
Dean, Francis D., Fayette
Gardner, Joseph W., Glasgow
Lamb, Sam E., 19 N.E. Monroe St., Portland, Oregon
Leech, Maurice P., Fayette
Shaw, William J., Fayette
Shaw, William J., Jr., Fayette

HOWELL COUNTY
(South Central Counties Medical Society)

IRON COUNTY
(Mineral Area County Medical Society)

JACKSON COUNTY MEDICAL SOCIETY
(Kansas City)

Aaron, George A., 505 Professional Bldg.
Adams, Noah, 818 Professional Bldg.
Adelman, Arthur, 909 Professional Bldg.
Ahlefeld, Charles B., 215 Pershing Rd.
Aisenstadt, E. Albert, 1204 W. 67th St.
Allebach, H. K., Research Hospital
Allen, Charles E., 712 Waldheim Bldg.
Allen, Charles H., First Natl. Bank Bldg., Indepencence
Allen, Robert E., 315 Nichols Rd.
Allen, Sylvia, 4635 Wyandotte St.
Allen, William B., 411 Alameda Rd.
Alsop, Webb S., Jr., St. Joseph Hospital
Altomare, Edw. P., 1030 E. Pacific
Altringer, Arthur N., 1622 Professional Bldg.
Anderson, A. Isadore, 723 W. 45th St.
Anderson, Raymond B., Plaza Time Bldg.
Anderson, Richard W., 21 W. 58th St.
Anderson, W. Connelly, 6416 Independence Ave.
Andrus, Bailey C., 233 Plaza Medical Bldg.
Arms, Arnold V., 231 Plaza Time Bldg.
Aschman, Theodore H., 174 Plaza Time Bldg.
Asher, Arthur G., 1220 Professional Bldg.
Atcheson, Bellfield, 5333 Mission Rd.
Atwell, Floyd C., 411 Nichols Rd.
Aull, John, 1306 Professional Bldg.
Baer, Alvin J., 1404 Bryant Bldg.
Ball, James E., 1102 E. 47th St.
Ballard, Volney B., 209 Plaza Time Bldg.
Barelli, Pat A., 194 Plaza Time Bldg.
Barnett, Gordon P., 6333 Brookside Plaza
Barry, Gerald W., 3601a Troost Ave.
Barry, William B., 116 W. 47th St.
Baum, Frank E., 507 Professional Bldg.
Baumhardt, Edward E., 4635 Wyandotte St.
Bay, Merrill R., Blue Springs
Beatty, Arch J., 67 Bay State Rd., Boston, Mass.
Becker, Richard R., 4000 Baltimore
Bee, James E., 3520 Broadway
Beil, J. Wallace, 1205 W. 59th St.
Belaval, Gustavo S., 2018 Chester, Kansas City, Kansas
Bell, William F., Lee's Summit
Belot, Monti L., 1440 W. Lexington Ave., Independence
Bennett, James D., 1630 Professional Bldg.
Bennett, Joseph S., 1533 Ash Ave., Independence
Berger, Dan L., Plaza Time Bldg.
Bergmann, Victor H., 1120 Professional Bldg.
Bernreiter, Michael, 436 Professional Bldg.
Berry, Maxwell G., 315 Alameda Rd.
Biggs, Harry L., 63rd & Blue Ridge, Raytown
Bills, Marvin L., 236 Plaza Time Bldg.
Birenboim, Irvin M., Kansas City General Hospital
Black, Donald R., 924 Professional Bldg.
Black, Engene C., 1228 Professional Bldg.
Blumenschein, J. C., 203 S. Spring Ave., Independence
Bohan, Peter T., 503 E. 44th St.
Bond, Marcus B., 314 Wirthman Bldg.
Boody, Robert J., Plaza Time Bldg.
Border, Charles T., 500 Gladstone Blvd.
Borenstine, Joseph, 121 W. 63rd St.
Boughnou, Harvey P., 315 Alameda Rd.
Bourke, Timothy S., 1207 Rialto Bldg.
Boutros, Amin, 416 Argyle Bldg.
Bowser, John F., Plaza Time Bldg.
Brainard, Benj. F., Martin City
Brams, Jack B., 330 Professional Bldg.
Brown, Adrian J., 215 Argyle Bldg.
Brown, Irwin S., 230 Plaza Time Bldg.
Brown, Robert S., 423 Decatur, Orange, Texas
Broyles, Glen H., 1232 Professional Bldg.
Brumm, Lawrence W., 508 Wirthman Bldg.
Bruner, Robert E., 912 Valentine Rd.
Brust, Carl H., 6114 Howe Dr., Mission, Kansas
Buckingham, William, 314 Professional Bldg.
Buckner, Robert C., Professional Bldg.
Budke, Harold A., Argyle Bldg.
Buhler, Victor B., General Hospital No. 1
Bunting, Williston P., 1622 Professional Bldg.
Burns, Beryl I., General Hospital No. 1
Burns, Jonathan E., 530 S. George St., Charles Town, W. Va.
Byers, Philip L., 4635 Wyandotte St.
Cain, Arthur S., Jr., 1630 Professional Bldg.
Caldwell, John K., 1036 Argyle Bldg.
Calkins, William G., General Hospital No. 1
Callaway, Luther M., 1000 Argyle Bldg.
Campbell, Frederick B., 1210 Professional Bldg.
Capell, Clarence S., 1135 Rialto Bldg.
Carbaugh, Glenn C., 2004 Bryant Bldg.
Carlson, Hjalmar E., 1316 Professional Bldg.
Carmichael, Francis A., Jr., 320 W. 47th St.
Carrier, Edson C., 315 Alameda Rd.
Casebolt, Buford T., General Hospital No. 1
Casebolt, Milton B., 4000 Baltimore
Casford, Ralph S., 315 Alameda Rd.
Castelaw, Rush E., 3731 Locust St.
Castles, John E., 1002 Argyle Bldg.
Cavaness, Ernest W., 1010 Neptune Dr., Leucadia, Calif.
Chambers, James Q., Jr., 1232 Professional Bldg.
Chapman, Samuel B., 830 Argyle Bldg.
Chatman, Eugene P., 2202½ E. 18th St.
Cheeseman, Wm. B., 530 Professional Bldg.
Clark, Harold B., Rialto Bldg.
Clasen, Arthur C., 1430 Professional Bldg.
Coburn, Donald F., 221 Plaza Time Bldg.
Cochrane, Joseph J., 200 Plaza Medical Bldg.
Cockerell, Sanford F., 11037 Winner Rd., Independence
Coffey, Ralph R., 1324 Professional Bldg.
Coffin, Helen K., 6415 Sagamore Rd.
Coffin, Theodore A., 911 Waldheim Bldg.
Cohen, Harry K., 318 Argyle Bldg.
Cohen, Hilliard, Menorah Hospital
Colby, Buford M., Hale
Comboy, Lawrence J., 604 W. Maple, Independence
Connell, Evan S., 1408 Commerce Bldg.
Conover, Chas. C., Trinity Lutheran Hospital
Cooper, John H., 1230 Argyle Bldg.
Cope, Joseph S., 1612 Professional Bldg.
Cortner, Mary C., 4526 Paseo
Counsell, Chester M., 708 W. 17th St.
Cowherd, Joseph B., 6247 Brookside
Cox, Kenneth E., 4635 Wyandotte
Culbertson, William F., 1743-C Waverly Way, Baltimore, Md.
Cummins, Walter F., 1612 Professional Bldg.
Curran, Edward J., 1805 Federal Reserve Bank Bldg.
Curran, Kevin E., 1805 Federal Reserve Bank Bldg.
Curran, Maurice D., 925 Grand Ave.
Cutcliff, Daniel J., 1222 McGee
Danglade, James H., Plaza Time Bldg.
Dann, David S., 410 Professional Bldg.
Davis, Herbert V., 411 Alameda Rd.
Davis, Jack M., Raytown
Davis, John J., 610 Professional Bldg.
Davis, Kenneth A., 231 W. 47th St.
Davis, Robert C., 820 Professional Bldg.
DeMaria, Peter F., St. Joseph Hospital
DeMott, Jack D., 2625 W. Paseo
DeMotte, John A., 249 Plaza Medical Bldg.
Dennie, Charles C., 1524 Professional Bldg.
Deweese, Everett R., 1010 Rialto Bldg.
Dickson, Frank D., 4312 Mill Creek Parkway
Diveley, Rexford L., 4312 Mill Creek Parkway
Dixon, Otto J., 1617 Professional Bldg.
Dixon, Vewiser L., 2204½ E. 18th St.
Dlabal, Luke J., 1210 Ash Ave., Independence
Doane, William L., 6232 Troost
Dodge, Mark, 231 Plaza Time Bldg.
Dodge, Milton, 321 Argyle Bldg.
Dodson, William W., 1010 Professional Bldg.
Donaldson, J. Earle, 525 E. Armour Blvd.
Dorsch, Ervin H., 10912½ Winner Rd., Independence
Downey, James W., 800 Argyle Bldg.
Drake, Roy F., 2414 Telephone Bldg.
Draney, Thomas E., Argyle Bldg.
Draney, Thomas L., 308 Argyle Bldg.
Drisko, Robert M., 1500 Professional Bldg.
Drowns, Bruce V., 1524 Professional Bldg.
Duer, Mildred C., 300 W. 47th St.
Duncan, Ralph E., 909 Argyle Bldg.
Duncan, William H., 1200 Professional Bldg.
Dwyer, Frank X., 231 W. 47th St.
Dwyer, Hugh L., 315 Alameda Rd.
Edde, Clifford G., 500 Argyle Bldg.
Edmonds, Devilla D., 4800 E. 24th St.
Eldridge, Charles J., 6247 Brookside Blvd.
Elliott, Benj. L., 1418 Professional Bldg.
Elliott, James R., 1216 Professional Bldg.
Elliott, Raymond G., 6136 Reinhardt Dr., Mission, Kansas
Elston, George B., 400 Argyle Bldg.
Engel, Lawrence P., 315 Alameda Rd.
Etzenhouser, Russell D., Jr., 400 First National Bank Bldg., Independence
Eubank, Dillard M., Raytown
Eubank, William R., 1404 Bryant Bldg.
Evans, E. John E., 321 Belt St., St. Louis
Farley, Claude C., 4526 Paseo
Farney, Jacob P., 6305 Brookside Pl.
Farnsworth, Jesse J., 730 Professional Bldg.
Feierabend, Frank L., 327 Argyle Bldg.
Feist, George V., 2400 Tomahawk Rd.
Ferguson, Donald S., 2012 E. 24th St.
Ferguson, Engene H., 933 Professional Bldg.
Ferguson, James T., 410 Bryant Bldg.
Ferris, Carl R., 934 Argyle Bldg.
Findley, James W., 411 Shukert Bldg.

Fitzgerald, Robert H., 231 W. 47th St.
Flanders, Horace F., 522 Professional Bldg.
Flatley, John A., Vet. Adm. Hosp.
Fleming, Royall B., 1433 E. 19th St.
Forman, Louis H., 4635 Wyandotte
Forsythe, Robert W., 170 Plaza Time Bldg.
Fowler, James W., 6510 Medical Group ARDC, Air Force Hosp., Flight Test Center, Edwards, Calif.
Frankl, George, 403 Argyle Bldg.
Fredeen, Robert C., Plaza Time Bldg.
Frick, John P., 800 Professional Bldg.
Friedman, Morris L., 414 Argyle Bldg.
Fuhrman, Donald L., 1524 Professional Bldg.
Gainey, Harold L., 4635 Wyandotte
Ganley, William C., 314 Argyle Bldg.
Gard, Raymond F., 604 W. Maple, Independence
Garrison, Roy F., Argyle Bldg.
Gaskins, John H., 1400 Professional Bldg.
Gempel, Paul A., 315 Nichols Rd.
Gentry, Enoch N., Jr., 2414 Telephone Bldg.
Geraughty, Edward, 302 Shukert Bldg.
Gestring, Hugh A., 1220 E. 31st St.
Getelson, Joseph, 1218 Rialto Bldg.
Gibson, David M., St. Luke's Hospital
Gilkey, Harry M., 1624 Professional Bldg.
Gilliland, Oliver S., 814 Professional Bldg.
Gillmor, Charles S., 1226 Rialto Bldg.
Ginsberg, A. Morris, 420 Professional Bldg.
Ginsberg, Norman A., 322 Professional Bldg.
Gist, William L., 108 E. 65th St. Terrace
Gist, William W., 1600 Professional Bldg.
Glasscock, Ernest L., 195 Plaza Time Bldg.
Goldman, Max, 1618 Professional Bldg.
Goldman, Stanley L., 2208 Bryant Bldg.
Goodman, Leroy, 235 Plaza Time Bldg.
Goodson, Wm. H., Jr., 730 Professional Bldg.
Grabske, Charles F., 129 W. Lexington, Independence
Graham, James W., 518 Argyle Bldg.
Graham, Wallace H., 518 Argyle Bldg.
Grauerholz, James W., 3527 Broadway
Greaves, Eli A., 1002 Argyle Bldg.
Green, Jess D., Jr., Raytown
Green, John R., First Natl. Bank Bldg., Independence
Green, John Richard, 310 Argyle Bldg.
Green, Stanley L., First Natl. Bank Bldg., Independence
Greene, W. Wallace, 1032 Professional Bldg.
Griffith, George W., 733 Rialto Bldg.
Griffith, John A., Jr., Plaza Medical Bldg.
Growdon, John A., 1324 Professional Bldg.
Guffey, Don Carlos, 717 Professional Bldg.
Gunn, Richard W., 6230 Truman Road
Haggen, Margaret E., 6228 Agnes St.
Haight, John M., 3401 E. 12th St.
Hale, Ralph, 4400 W. 62 Terrace, Mission, Kansas
Haley, Jack A., 4949 Rockhill Rd.
Hall, James R., 6417 Willow Lane
Hall, Thomas B., 902 Professional Bldg.
Hallberg, John W., 231 West 47th St.
Halperin, Phillip H., 409 Professional Bldg.
Hamel, Herbert A., 928 Argyle Bldg.
Hamilton, Hugh G., Plaza Time Bldg.
Hardacre, Ruth A., 4247 Troost
Harless, Morris S., 6247 Brookside
Harned, Bert W., 6600 Med. Sq., APO 862, c/o P. M., New York, N. Y.
Hart, William W., 3738 Benton St.
Hashinger, Edward H., 411 Alameda Rd.
Haynes, Lee, 820 Archibald
Haynes, Solon E., 1200 Professional Bldg.
Hazen, Robert M., 1014 Argyle Bldg.
Hearst, Allen L., 1100 Professional Bldg.
Heller, B. Marcus, 416 Bryant Bldg.
Helman, Richard G., 625 Professional Bldg.
Henry, Schubert D., 1115 Grand Ave.
Herbst, Frank, 330 West 45th Terrace
Herrman, George V., Plaza Time Bldg.
Hess, Henry L., 1207 Rialto Bldg.
Hess, Paul D., 8423 High Drive
Hibbard, Blaine Z., 209 Plaza Time Bldg.
Hickerson, John C., First Natl. Bank Bldg., Independence
Hickerson, Wm. H., First Natl. Bank Bldg., Independence
Higgins, Robert S., 1107 Bryant Bldg.
Hill, Jack H., Trinity Lutheran Hospital
Hill, Jesse N., 1428 Hedges Ave., Independence
Hines, Paul, 2625 W. Paseo
Hink, Frederick W., 10235 Independence Rd.
Hodgson, Frank H., 4301 Main St.
Hodgson, Robert B., 4301 Main St.
Hoeper, Samuel D., 6232 Troost
Hoffman, Jacob S., 330 Professional Bldg.
Hoffman, R. Lee, 1019 Professional Bldg.
Hogan, Daniel F., 801½ W. 39th St.
Hogue, Frank S., 315 Alameda Rd.
Holbrook, Walter F., 3230 Wabash Ave.
Hollweg, Kenneth C., 612 Bryant Bldg.
Holman, H. Frank, General Hospital No. 1
Holton, Edward B., First Natl. Bank Bldg., Independence
Hook, Waller C., 510 Professional Bldg.
Howard, John C., Jr., 411 Alameda Rd.
Hoxie, George H., 2808 Hillegass Ave., Berkeley, Calif.
Hughes, Gerald E., 1107 Bryant Bldg.
Hungate, Carroll P., 934 Argyle Bldg.
Hunt, Claude J., 1612 Professional Bldg.
Hunter, Martin P., 1408 Waldheim Bldg.
Hurwitt, Frank, 400 Professional Bldg.
Ibach, Harold F., Veterans Admin. Hospital, Wadsworth, Kansas
Ingram, Walton C., 320 W. 47th St.
Irland, Robert D., Union Station Hospital
Irwig, Fred, 1610 Professional Bldg.
Jackson, Wm. R., 1107 Bryant Bldg.
Jacob, Walter P., Bryant Bldg.
Jacobs, Morton, 6748 Holmes
Jaime, Nicholas, 4050 Broadway
James, Otis E., Jr., 928 Argyle Bldg.
Janis, Lee D., 4949 Rockhill Rd.
Jansen, Robert, 2220 E. 31st St.
Jarvis, James A., 236 Plaza Time Bldg.
Jeffries, Robert C., 6315 Brookside Plaza
Jennett, Harry N., 2701 Forest Ave.
Jennett, James H., 424 Professional Bldg.
Jennison, Maurice H., 6619 Clark St., Des Moines, Iowa
Johnson, C. Lawrence, 1316 Professional Bldg.
Johnson, Edgar W., 1130 Rialto Bldg.
Johnson, Edgar W., Jr., 286 Plaza Theatre Bldg.
Johnson, Paul A., 121 N. Chelsea
Johnson, Thomas M., 300 W. 47th St.
Johnson, Wm. A., 2206½ E. 18th St.
Johnstone, Paul N., 1110 Bryant Bldg.
Jones, George H., 80th & Paseo Sts.
Jones, Kneeland P., Address Unknown
Jones, Theodore R., 1107 Bryant Bldg.
Juarez-Reyna, Guillermo, 1032 Professional Bldg.
Kantor, Julius M., 204 Argyle Bldg.
Kantor, Samuel, 1409 Bryant Bldg.
Katz, Milton, 414 Argyle Bldg.
Kaul, Philip G., Plaza Time Bldg.
Kealhofer, George C., 4050 Broadway
Keeler, James E., 4301 Main St.
Keeling, Irene C., 822 W. 57th Terrace
Keith, Willis E., 204 Argyle Bldg.
Kelly, Eugene H., 402 Wabash Ave.
Keltner, Raymond O., Raytown
Kent, Bela K., 1109 Professional Bldg.
Kent, Clifford F., 1306 Bryant Bldg.
Kerr, Russell W., St. Joseph Hospital
Ketcham, Wm. M., 1408 Waldheim Bldg.
Ketron, Marvin B., 5933 Cherry St.
Kienberger, Paul A., St. Joseph Hospital
Kiene, Richard H., 5835 High Dr.
Kimball, Merritt H., 91 Janssen Place
Kirkpatrick, Milton E., 10th Floor, City Hall
Kitchen, Wm. M., 1010 Rialto Bldg.
Klein, Edward H., 200 Plaza Medical Bldg.
Klepinger, Dayton P., 500 Argyle Bldg.
Knight, John S., 1622 Professional Bldg.
Knight, Lyle B., 8 West 3rd St., Lee's Summit
Knoch, H. Kermit, 1400 Professional Bldg.
Knox,Andrew C., 608 Shukert Bldg.
Koehler, Charles A., 511 Wirthman Bldg.
Koenig, Frank J., 1300 Professional Bldg.
Kohn, Cecil M., 630 Professional Bldg.
Korth, William M., 612 Professional Bldg.
Kovitz, Louis, 1440 Professional Bldg.
Kraft, Jacob, 465 Wisconsin Drive East, Forestol Village, Chicago, Ill.
Kranson, Seymour J., 1210 Ash Ave., Independence
Kyger, Fred B., 510 Professional Bldg.
Kyner, Thos. A., 214 Wirthman Bldg.
Lacy, N. Eugene, Plaza Time Bldg.
Laffoon, France L., Raytown
Lakaytis, Charles A., 2700 Tracy
Lally, James J., 1207 Rialto Bldg.
Lamar, Frederick C., 624 Professional Bldg.
Lamar, Robert F., 624 Professional Bldg.
Landis, George K., 1630 Professional Bldg.
Laning, J. Halcombe, 6205 Brookside
Lapi, Angelo, St. Mary's Hospital
Lapi, Ruth M., 1551 Lexington Court
Lapp, Harry C., 1314 Professional Bldg.
Lapp, John G., 1314 Professional Bldg.
Latham, Raymond W., Plaza Theatre Bldg.
Laurenzana, Frank P., 428 S. White
Layton, Ira C., Argyle Bldg.
Lecklitner, Myron D., 200 Professional Bldg.
Lee, Chester E., 411 Alameda
Lee, George C., 1630 Professional Bldg.
Lehner, Richard L., 406 Bryant Bldg.
Leifer, William W., 505 Professional Bldg.
Leitch, Cecil G., 1010 Professional Bldg.
Leitz, Frank B., 1530 Professional Bldg.
Lemoine, Albert N., Plaza Time Bldg.
Leonard, Ward H., 3515 Independence St., Tulsa, Okla.
Levey, Harry B., 200 Argyle Bldg.
Lewis, Revis C., 221 Plaza Time Bldg.
Lewis, William E., 4435 Harrison St.
Lichtor, Alexander, 1102 Grand Ave.
Lichtor, Joseph M., 1310 Bryant Bldg.
Lieberman, B. Albert, Jr., 1002 Professional Bldg.
Liersch, Joseph C., 400 Professional Bldg.
Lilly, Terry E., 807 Argyle Bldg.
Lilly, Terry E., Jr., 2117 West 50th St.
Lindquist, Carl N., 106 W. 14th St.
Link, Vance E., First Natl. Bank Bldg., Independence
Linville, Howard E., 5th General Hosp., APO 36, New York, N. Y.
Lockwood, Ira H., 830 Argyle Bldg.
Loewy, Louise B., 2625 Paseo
Long, Robert S., 4800 E. 24th St.
Lowell, Paul, 6105 Swope Parkway
Lowrey, Ford J., 733 Rialto Bldg.
Lundgren, Fred H., Jr., 9216 High Dr.
Luppens, Albert F., Address Unknown
Lyddon, Harold R., Jr., Westbrook Bldg.
McAlester, Andrew W., Jr., 2003 Bryant Bldg.
McAlester, Andrew W., III, 2003 Bryant Bldg.
McCanse, Raymond A., 241 Plaza Time Bldg.
McCarthy, Wm. F., 313 S. Liberty, Independence
McClanahan, Robert C., 820 Professional Bldg.
McConchie, James E., First Natl. Bank Bldg., Independence
McCoy, Frederick J., 1416 Professional Bldg.
McCubbin, Clarence R., 400 Professional Bldg.
McCullough, Campbell C., Argyle Bldg.
McCunniff, Wm. B., Argyle Bldg.
McDonald, Bruce P., 2604 Prospect Ave.
McDonnell, John F., Plaza Medical Bldg.
McFarland, M. D., Plaza Medical Bldg.
McHale, Thomas C., 4620 Independence Ave.
McKee, Joseph W., 1332 Professional Bldg.
McLeod, John, 205 Plaza Theatre Bldg.
McMillan, Thomas E., 1019 Professional Bldg.
McPhee, William R., Corona Naval Hospital, Corona, Calif.
McPherson, Owen P., 1424 Professional Bldg.
McVay, James R., 814 Porter Bldg.
McVay, James R., Jr., 814 Porter Bldg.
MacInnis, Florence E., 618 Professional Bldg.
Maclean, John A., 600 N. Canyon Rd., Monrovia, Calif.
Major, Hermon S., 3100 Euclid Ave.
Mantz, Herbert L., 618 Professional Bldg.
Marks, Mark M., 332 Professional Bldg.
Marshall, Cameron F., 201 Plaza Theatre Bldg.
Marty, Loraine A., Lakeview Heights
Mathewson, Hugh S., 2105 W. 42nd Ave., Kansas City, Kans.
Mayer, John H., Jr., 618 Professional Bldg.
Melgaard, S. Ross, 6831 Cherry
Meyer, Paul W., 4312 Mill Creek Parkway
Miles, George O., 411 Alameda Rd.
Miller, Clinton L., 8 W. 3rd St., Lee's Summit
Miller, Gerald L., 730 Professional Bldg.
Miller, Wade H., 305 Professional Bldg.
Miller, Walter P., 800 Argyle Bldg.

Mitchell, Robert H., 410 Bryant Bldg.
Mixson, Wm. C., 4635 Wyandotte
Monahan, Elmer P., 814 Argyle Bldg.
Montgomery, James G., 1332 Professional Bldg.
Mooney, Justin L., 1420 Bryant Bldg.
Mooney, Marcel L., 1420 Bryant Bldg.
Moore, Robert A., 106 W. 14th St.
Morest, F. Stanley, 1000 Professional Bldg.
Morgan, David B., 520 Professional Bldg.
Morley, Louise A., 1103 Armour Blvd.
Morrow, Raymond L., 424 Professional Bldg.
Moss, Paul, 1306 Bryant Bldg.
Mueller, Martin J., 934 Argyle Bldg.
Mueller, Ralph E., 600 Professional Bldg.
Mullen, Leo M., 3548 Indiana Ave.
Multhauf, Cyril J., 1222 McGee
Mundy, William L., 420 Professional Bldg.
Murphy, Jerome P., Apt. 265, Public Housing Admin. Prog., Camp Atterbury, Ind.
Murphy, Robert J., 4301 Main St.
Myers, John L., 815 Shukert Bldg.
Myers, John S., 815 Shukert Bldg.
Myers, Ralph R., U. S. Naval Hospital, Bremerton, Wash.
Myers, Robert M., 1025 Rialto Bldg.
Myers, Wilson A., 815 Shukert Bldg.
Needels, Orval T., 7400 Wornall Rd.
Nelson, Charles S., 3626½ Independence Ave.
Nelson, Fred L., 2300 Holmes
Nickson, Charles E., Jr., 302 First Natl. Bank Bldg., Independence
Nicolay, Kenneth S., 4635 Wyandotte
Niedermeyer, Fred P., Professional Bldg.
Nigro, Dominic M., 925 Argyle Bldg.
Nigro, E. Robert, 925 Argyle Bldg.
Nigro, Joseph A., 925 Argyle Bldg.
Noltensmeyer, Milton N., 3616 E. Roanoke Dr.
Nunn, Pat M., 524 Southwest Blvd., Kansas City, Kans.
O'Brien, Leo A., 1002 Argyle Bldg.
O'Brien, Raymond W., 286 Plaza Theatre Bldg.
Ockerblad, Nelse F., 200 Plaza Time Bldg.
O'Connell, Frank A., 329 Argyle Bldg.
O'Connell, P. J., 327 Argyle Bldg.
Ogilvie, John H., 224 Rialto Bldg.
Ogleve, Rial R., 522 Professional Bldg.
O'Malley, James F., 4801 Linwood
O'Neil, James H., 424 Professional Bldg.
Osgood, George M., 915 Professional Bldg.
Overesch, Harry B., 600 Professional Bldg.
Owens, Graham J., 1034 Rialto Bldg.
Owens, Hugh H., 1034 Rialto Bldg.
Owens, Michael J., 1034 Rialto Bldg.
Owens, Richard L., 1034 Rialto Bldg.
Owens, Robert H., 1034 Rialto Bldg.
Padfield, Earl G., Medical Dept., Naval Training Center, San Diego, Calif.
Pakula, Sidney F., 251 Plaza Time Bldg.
Pallett, Harold A., 1132 Professional Bldg.
Parker, Elmer L., 3420 Troost
Parker, Hubert M., 520 Argyle Bldg.
Parker, Joseph W., Jr., 200 E. 56th St.
Parsons, Eugene O., 315 Alameda Rd.
Passman, Harold, 1116 Professional Bldg.
Patterson, John R., Plaza Time Bldg.
Pearson, Paul E., 1025 Rialto Bldg.
Peete, Don Carlos, 1500 Professional Bldg.
Pendleton, George F., 403 West 68th St.
Perll, Maurice F., 1247 W. Gregory
Perll, Rita D., 4711 Central
Perry, Ralph, 4800 East 24th St.
Peterson, Carl M., 2462a Brooklyn Ave.
Peterson, Milton C., 400 Professional Bldg.
Peterson, Walter R., 2462a Brooklyn Ave.
Petry, Ezra L., Argyle Bldg.
Pfuetze, Edwin L., 1424 Professional Bldg.
Pickard, Nicholas S., 241 Plaza Time Bldg.
Pickens, Edgar E., 4826 Roanoke Parkway
Pierron, John B., 5334 Clark Dr. Kansas City, Kans.
Piper, Donald K., U. S. Navy Hospital, Oceanside, Calif.
Pipkin, F. Garrett, 409 Argyle Bldg.
Pittam, Radford F., 830 Professional Bldg.
Platt, Paul C., 1614 City Hall
Polk, George M., R. 1, Box 3, Lee's Summit
Pollock, Leo H., 1310 Bryant Bldg.
Poorman, Bert A., 2836 Prospect Ave.
Porter, Louis, 400 Professional Bldg.
Potter, Lee G., 724 Professional Bldg.
Powell, Benson M., 7203 Wyandotte
Powers, John M., 3304 Linwood
Prentiss, Harry S., 900 Rialto Bldg.
Preston, Albert, Jr., 4635 Wyandotte
Price, Edward B., Jr., General Hospital No. 1
Printz, Joseph H., 1025 Professional Bldg.
Printz, Otto J., 229 Ward Parkway
Pugh, Richard G., 317 W. Kansas, Independence
Quistgard, Paul C., 6741 Prospect
Rader, Ada B., Martin City
Ragan, Romulus C., 404½ W. 75th St.
Ramos, John F., Jr., 2462a Brooklyn Ave.
Rannie, Paul R., Independence
Reinhardt, George R., Tokyo Army Hospital, APO 1052, San Francisco, Calif.
Reitz, Carl H., 404½ W. 75th St.
Remley, George C., 832 Argyle Bldg.
Rhoades, Arthur B., 2300 W. 51st Terrace, Kansas City, Kans.
Richardson, Marion W., 2526 Prospect Ave.
Riller, Lowell E., 530 Professional Bldg.
Rinkel, Herbert J., 2005 Bryant Bldg.
Rising, Jesse D., 814 Professional Bldg.
Roberts, Harold M., 1530 Professional Bldg.
Roberts, Sam E., 1110 Professional Bldg.
Robertson, James A., 708 W. 48th St.
Robinson, Arthur W., 4635 Wyandotte
Robinson, Donald E., U.S.N. Hospital, Portsmouth, Va.
Robinson, Ernest Kip, 1228 Professional Bldg.
Robinson, G. Wilse, 2625 Paseo
Robinson, G. Wilse, Jr., 2625 Paseo
Robinson, William J., 1828 Walnut St.
Robison, James T., Jr., 411 Nichols Rd.
Rodgers, Samuel U., 2462a Brooklyn Ave.
Rose, Charles W., 103 N. Elmwood
Roy, Gustave A., Field Med. Training Bn., Camp Pendleton, Oceanside, Calif.
Rubin, Sidney, Menorah Hospital
Rubnitz, Leon H., 400 Professional Bldg.
Rufe, Jack R., 2003 Bryant Bldg.
Russell, Robert K., 63rd & Blue Ridge Rd., Raytown
Saferstein, A. Lester, 6859 Cherry
Saladino, Anthony, 1040 Argyle Bldg.
Samson, Ralph B., 1210 Professional Bldg.
Samuelsen, Edward A., 2603 East 31st St.
Sanders, William F., Professional Bldg.
Saunders, Everett L., 121½ W. Lexington, Independence
Sawyers, Gordon E., 830 Argyle Bldg.
Scarpellino, Louis A., 36 E. 52nd St.
Schaefer, Charles L., 3937 Main St.
Schaerrer, Hans, 314 Shukert Bldg.
Schaerrer, William C., 4635 Wyandotte St.
Schauffler, Robert M., 518 West 10th St.
Schiffmacher, Jack E., 700 Professional Bldg.
Schorer, Edwin H., 1910 W. 56th St.
Schultz, Loraine E., 1025 N. 22nd St.
Schutz, Carl B., 320 W. 47th St.
Schutz, Richard B., Plaza Time Bldg.
Seely, Clark W., Plaza Time Bldg.
Sewell, Minor F., 1722 W. 39th St.
Shapiro, Lazare M., 628 Professional Bldg.
Shelden, Russell D., 400 Professional Bldg.
Sheldon, John G., 604 Commerce Bank Bldg.
Sheldon, John, Vineyard Park Hospital
Sherwood, Loraine, 417 E. 13th St.
Shifrin, Alexander, 1406 Bryant Bldg.
Shofstall, Charles K., 300 W. 47th St.
Shofstall, William H., 300 W. 47th St.
Shook, Lester D., 830 Argyle Bldg.
Shuey, Herbert H., 3903 Brooklyn
Shumate, David L., 500 Argyle Bldg.
Shypper, Moses J., 1115 Grand
Simpson, Morris B., 1408 Professional Bldg.
Sinclair, Alexander B., 4711 Central St.
Singleton, J. Milton, 315 Alameda Rd.
Skinner, John O., 1402 Bryant Bldg.
Skinner, John T., 1402 Bryant Bldg.
Skoog, Andrew L., 919 Rialto Bldg.
Slentz, William A., Plaza Medical Bldg.
Slusher, Ernest W., 806 Rialto Bldg.
Small, Walter L., Hyde Park Hotel
Smith, Arthur B., 830 Argyle Bldg.
Smith, Ira T., 1019 Professional Bldg.
Sneid, Philip, 1828 Walnut
Snider, Samuel H., 221 Plaza Medical Bldg.
Soderberg, N. B., Brooke Army Medical Center, San Antonio, Texas
Sophian, Abraham, 1405 Bryant Bldg.
Spafford, Allen L., 1414 Professional Bldg.
Stacey, Wallace R., 503 First Natl. Bank Bldg., Independence
Staggs, William A., 822 Argyle Bldg.
Statland, Harry, 1406 Bryant Bldg.
Statland, Morris, U. S. Naval Hospital, Puget Sound, Bremerton, Wash.
Steffen, Lawrence F., 1220 Professional Bldg.
Stewart, Robert H., 2300 Holmes
Stockton, Raymond W., 286 Plaza Theatre Bldg.
Stockwell, A. Lloyd, 600 Professional Bldg.
Stratemeier, Edward H., General Hospital No. 1
Strong, Richard M., c/o E. C. Yates, Smithville
Summers, Caldwell B., 222 Plaza Theatre Bldg.
Swisher, Robert C., 5509 Brookside
Switzer, Clyde, R.R. 2, Grandview
Tabris, Julius A., 405 Argyle Bldg.
Tamblyn, Claire J., 7613 Madison
Tarson, Solomon S., 3221 Troost
Tasker, Charles B., 730 Professional Bldg.
Teachenor, Frank R., 221 Plaza Time Bldg.
Teall, Raymond E., 1016 Professional Bldg.
Tesson, James A., 907 Rialto Bldg.
Theel, Otto W., Jr., 123 E. 39th St.
Thiele, George H., 6526 High Dr.
Thiessen, Edward H., 411 Alameda Rd.
Thomas, Miles E., Chief of Laboratory Serv., USAH, Fort Filey, Kansas
Thomason, Henry E., 1132 Professional Bldg.
Thorn, Druery R., 1107 Bryant Bldg.
Treharne, Frank E., 171 W. Walnut St., Independence
Trippe, Harrison C., 1014 Argyle Bldg.
Trowbridge, Barnard C., Plaza Medical Bldg.
Trowbridge, Ellsworth H., 1905 Bryant Bldg.
Trowbridge, Ellsworth H., Jr., 1905 Bryant Bldg.
Turner, Percy C., 1433 E. 19th St.
Tuthill, Herbert, 1211 Rialto Bldg.
Tuttle, Floyd W., Blue Springs
Twin, Edward J., Argyle Bldg.
Twyman, Elmer D., 750 W. 47th St.
Twyman, Richard A., 1314 Professional Bldg.
Underwood, Dick H., 1107 Bryant Bldg.
Underwood, Harry A., 4712½ E. 24th St.
Underwood, Johnson, Jr., 1600 Professional Bldg.
Underwood, Ross H., 1107 Bryant Bldg.
Unger, Harold, 1300 Bryant Bldg.
Upsher, Albert E., Blue Springs
Valentine, Herbert S., 1124 Professional Bldg.
VanBiber, James T., 317 W. Kansas, Independence
VanDel, Dwight T., 909 Professional Bldg.
Vilmer, Charles, 1216 Professional Bldg.
Vincent, Jack C., 205 Argyle Bldg.
Virden, C. Edgar, 700 Professional Bldg.
Virden, Herbert H., 700 Professional Bldg.
Wade, Frederick E., 1012 Professional Bldg.
Wakefield, Franklin Jr., 2004 Bryant Bldg.
Walker, James C., 1424 Professional Bldg.
Walker, John W., 830 Argyle Bldg.
Wall, Arthur H., 153 Santa Anita, Sierra Madre, Calif.
Wall, Harry C., Argyle Bldg.
Wallace, Frank B., Rialto Bldg.
Walthall, Damon O., 315 Alameda Rd.
Watson, B. Frank, 1808 Harvard Ave., Independence
Watson, Ethel, 403 First Natl. Bank Bldg., Independence
Waxman, David, 4802 Prospect Ave.
Waxman, Jane Z., 4802 Prospect Ave.
Weaver, John L., General Hospital No. 1
Webster, Joseph G., 1400 Professional Bldg.
Weiford, Edward C., 320 W. 47th St.
Welker, Joseph E., 834 Professional Bldg.
Weltscheff, Christo A., 7449 Broadway
Werner, Franklin C., 522 Professional Bldg.
Wheeler, John H., 411 Alameda Rd.
White, Charles H., 4125 Brookridge, Mission, Kansas
White, Edwin C., 1032 Professional Bldg.
White, George A., 729 Shukert Bldg.
White, Stoughton F., 915 Professional Bldg.
Whiteman, John R., 6314 Brookside Plaza

Whitman, Doyle C., 1003 Sharp Bldg.
Wien, Irving A., 321 Argyle Bldg.
Wilhelm, Warren F., 107 W. Linwood
Wilkinson, Everett A., 1332 Professional Bldg.
Williams, Delon A., 806 Professional Bldg.
Williams, Joseph C., Jr., 830 Professional Bldg.
Williams, Luke E., 2201 E. 27th St.
Williams, Robert A., 5400 St. John Ave.
Williams, Vincent T., 836 Argyle Bldg.
Willits, Lyle G., 1515 Professional Bldg.
Willoughby, Jean B., 1032 Professional Bldg.
Wilson, Clifford C., 217 Plaza Time Bldg.
Wilson, Fernando I., 116 W. 47th St.
Wilson, Hester J., 233 Plaza Time Bldg.
Winkelman, Esther B., 7449 Broadway
Winston, Bernard H., 324 Professional Bldg.
Wise, George W., 204 Plaza Time Bldg.
Withers, Orval R., 1418 Bryant Bldg.
Wolf, Jack W., 206 Argyle Bldg.
Wood, Laurence E., Plaza Time Bldg.
Woods, Harold V., 121½ W. Lexington, Independence
Wortmann, Robert F., 510 Professional Bldg.
Wright, R. Paul, 1324 Professional Bldg.
Wu, William Q., 215 Argyle Bldg.
Yazel, Herman E., 733 Rialto Bldg.
Young, James E., 4635 Wyandotte
Young, Jesse W., 1401 Southwest Blvd.
Zellermayer, Jacob, 609 Professional Bldg.
Ziegler, Allen M., 320 W. 47th St.
Zoglin, Nathan M., 927 Argyle Bldg.
Zuber, Harold V., 600 Professional Bldg.

JASPER COUNTY MEDICAL SOCIETY
(Joplin)

Alberty, Omer L., Carl Junction
Birsner, Frank H., Carthage
Black, Mervin H., 516 Frisco Bldg.
Blanke, Otto T., 725 Frisco Bldg.
Blankenship, George W., Anderson
Bragdon, George H., Reeds
Burch, John E., 804 Frisco Bldg.
Butterworth, Nelson S., 910 Kensington Rd.
Byrd, Homer E., Carthage
Clinton, Lloyd B., Carthage
Coates, Charles C., Frisco Bldg.
Craig, Irwin T., 829 Frisco Bldg.
Craig, William E., Address Unknown
Crawford, Archie L., 631 Frisco Bldg.
Curl, Howard, 622 Frisco Bldg.
DeTar, Burleigh E., 410 Jackson St.
DeTar, Burleigh E., Jr., 410 Jackson St.
Douglas, John W., 210 W. 32nd St.
Douglass, Daniel D., Frisco Bldg.
Douglass, Jesse E., Webb City
Eliscu, Juliette, Frisco Bldg.
Ferguson, Ralph L., Frisco Bldg.
Ferguson, Robert M., Webb City
Grantham, Samuel A., Jr., 420 Byers
Hall, Marvin F., 622 Frisco Bldg.
Hamilton, Eugene H., 325 Frisco Bldg.
Harris, Russell D., 605 N.W. Tenth St., Oklahoma City, Okla.
Holtzman, Samuel, 811 Frisco Bldg.
Hornback, Edward R., 215 Frisco Bldg.
Howard, Walter M., 301 Frisco Bldg.
Hurst, W. W., National Bank Bldg.
Isbell, Charles H., Carthage
James, Edward D., 826 Frisco Bldg.
James, Robert M., 504 Jackson
Jeans, Virgil, National Bank Bldg.
Kenney, Verna E., Miners Bank Bldg.
Kiehl, Katharine, DeTar Clinic
Kirschman, Robert E., 215 Frisco Bldg.
Koehler, John W., Frisco Bldg.
Kuhn, John R., Jr., 321 Frisco Bldg.
Laney, Ronald L., R. 4, Box 34
McIntire, Emery J., Carthage
McNew, William T., Carthage
McPike, Lloyd H., 607 Frisco Bldg.
Mack, Mary L., 602 N. Byers
Maddox, John D., 528 Pearl St.
Meinhardt, Ralph E., DeTar Clinic
Mitchell, Ernest, Goodman
Myers, Roy E., Frisco Bldg.
Neff, Robert L., 503 Frisco Bldg.
Old, Jacob W., Jr., 4104 Brandt, Houston, Texas
Paddock, Charles S., Frisco Bldg.
Papp, Sandor D., Frisco Bldg.
Patterson, Grover S., Carthage
Poor, Carl W., Address Unknown
Post, Winfred L., 617 Joplin St.
Powers, Everett, Carthage
Putnam, John A., Carthage
Reid, Charles T., 614 Hampton Place
Rosenthal, Frances E., 724 Frisco Bldg.
Saylor, Robert K., 2801 E. 12th St.
Schoeberl, C. B., U.S.N. Hospital, Great Lakes, Ill.
Schulte, G. A., 622½ Main St.
Scorse, Sidney W., Frisco Bldg.
Simmons, Leroy, Sarcoxie
Sims, John L., 605 Frisco Bldg.
Slentz, E. L., 410 Jackson Ave.
Smith, Roland T., 821 Frisco Bldg.
Smith, William R., Carthage
Stormont, Riley M., Webb City
Sutphin, John B., 631 Frisco Bldg.
Van Urk, Jules B., Carthage
Walker, Paul W., Frisco Bldg.
Webster, Roger W., 369 Crest Drive, San Jose, Calif.
Whitten, M. Foster, Carthage
Wilson, Alice H., 1923 Sergeant
Wood, George H., Carthage
York, William B., Sarcoxie

JEFFERSON COUNTY MEDICAL SOCIETY

Arbuckle, Millard F., 505 Humboldt Bldg., St. Louis
Bolgar, Bartholomew, Festus
Commerford, James J., Crystal City
Dobbins, Thomas, Hillsboro
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Edwards, T. Burton, Cedar Hill
Edwards, Waldo B., Cedar Hill
Fallet, Charles E., DeSoto
McKinstry, Karl V., DeSoto
Reich, Oliver F., Kimmswick
Rutledge, John F., Crystal City
Schulein, Vernon E., Crystal City
Senn, Emmett J., Herculaneum
Yoskit, Harry, Festus

JOHNSON COUNTY MEDICAL SOCIETY

Cooper, R. Lee, Warrensburg
Damron, Oscar H., Warrensburg
Grove, Gulph W., Knob Noster
Harkness, Harry, Warrensburg
Holmes, David R., Warrensburg
Johnson, Charles S., Warrensburg
Lederer, Charles M., Warrensburg
Maxson, T. Reed, Warrensburg
Parker, Harry F., Box 606, Haines City, Fla.
Patterson, William R., Warrensburg
Rawlins, Kelly, Holden
Thompson, William G., Holden

KNOX COUNTY
(North Central Counties Medical Society)

LACLEDE COUNTY MEDICAL SOCIETY

Carlton, Charles E., Stoutland
Carrington, Howard W., Lebanon
Casey, Shederic A., Lebanon
Fisher, George E., Lebanon
Froelich, Rae W., Lebanon
Harrell, Roosevelt E., Lebanon
Hope, James L., Lebanon
Hurst, Ben B., Lebanon
Jenkins, Paul A., Lebanon
Johnson, Ferrell H., Lebanon
Lindsay, John W., Conway
Peckham, John W., 6022 Clemens Ave., St. Louis
Summers, Jacob H., Lebanon

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

Best, Robert, Higginsville
Brady, Hugh S., Concordia
Brasher, Ben H., Lexington
Buehrer, Cletus E., Lawson
Bumgarner, James E., 5201 W. 72nd St., Prairie Village, Kansas
Fulkerson, Wilbur E., Higginsville
Goldberg, Isadore E., Braymer
Greene, Luther D., Richmond
Johnson, M. C., Richmond
Kelling, Douglas G., Waverly
Kelling, George A., Waverly
Kelling, Jordan, Waverly
Koppenbrink, Walter E., Jr., Higginsville
Lissack, Edmund, Concordia
Liston, Odus, Oak Grove
Martin, Wilfred E., Odessa
Masterson, Melvin L., Richmond
Nisbet, Eliga B., Odessa
Payne, Bryan T., Lexington
Ryland, Caius T., Lexington
Schooley, Renick C., Odessa
Shouse, Edwin, Lawson
Ward, Joe, Lexington
Williams, John W., Oak Grove
Willis, John B., Mayview

LAWRENCE COUNTY
(Ozarks Medical Society)

LEWIS-CLARK-SCOTLAND COUNTIES MEDICAL SOCIETY

Bridges, James R., Kahoka
Davis, Landis Y., Canton
Ellery, William L., LaGrange
Jennings, Perry W., Canton

LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY
(St. Charles)

Barnard, Charles A., Portage des Sioux
Behan, Lawrence G., 3416 St. Johns Dr., Dallas, Texas
Budke, Robert J., 126 S. Main St.
Canty, Eugene J., R. R. No. 1
Clay, Calvin, 106 Washington St.
Creech, Joseph C., Troy
Crider, Russell J., Hotel Bldg.
Damron, Edward O., Elsberry
Dyer, John H., Warrenton
Greene, Maurice L., 144 N. Main St.
Hardin, Thomas L., 121 N. Main St.
Harris, Harold S., Troy
Hicks, Edward A., Troy
Jenkins, Joseph M., 117 S. Main St.
Kister, George E., 818 N. Second St.
Klink, Lon B., 207 N. Fifth St.
Krieger, John L., 1219 Louisville St., St. Louis
Licon, Francisco, Winfield
McIntire, Landon R., 117 S. Main St.
McMurray, Herbert C., Wentzville
Muschany, Norman K., Troy
Neubeiser, Ben L., 206 Washington St.
Nichols, Samuel I., Address Unknown
Penn, Robert M., Silex
Poggemeier, William H., Jr., 200 Clay St.
Randall, Don Q., 207 N. Fifth St.
Reeves, Gerald A., 207 N. Fifth St.
Schneider, Vincent A., 207 N. Fifth St.
Schulz, Arthur P. E., 16 Jefferson St.
Smith, Vernon L., 141st Gen. Hosp., APO 1005 c/o P.M., San Francisco, Calif.
Towers, Orville W., 114 N. Main St.

LINN COUNTY
(Grand River Medical Society)

LIVINGSTON COUNTY
(Grand River Medical Society)

MCDONALD COUNTY
(Unorganized)

MACON COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MADISON COUNTY
(Mineral Area County Medical Society)

MARIES COUNTY
(Phelps-Crawford-Dent-Pulaski-Maries County Medical Society)

MARION-RALLS-SHELBY COUNTY MEDICAL SOCIETY
(Hannibal)

Archer, Perry C., Shelbyville
Birney, Willian P., 1003 Broadway
Brown, John E., Perry
Burns, Francis R., 226 Broadway
Canella, John M., 707 Broadway
Chilton, James C., 500 Broadway
Francka, W. F., 228 Broadway
Goodrich, Howard B., 1200 Venetian Way, Winter Park, Fla.
Greene, Harry L., Holmes Bldg.
Hamlin, Wyeth, Palmyra
Hardesty, Joel W., Holmes Bldg.
Hoerchler, T. J., Shelbina
Hopson, George, Monroe City
Hornback, George A., 500 Broadway
Kibbe, John H., Monroe City
Landau, Daniel B., B & L Bldg.
Lanning, Robert J., B & L Bldg.
Levine, Ervan L., Vandalia
Lucke, Eugene M., Court House
Malley, John A., 1436 N. Fifth St., Quincy, Ill.
Murphy, Bernard L., 2000 Crescent Dr.

Norton, Harry B., 110 N. Sixth St.
Reichman, John J., 1001 Broadway
Roller, Merrill J., 228 Broadway
Smith, Ulysses S., Trust Bldg.
Smith, William J., 507 Trust Bldg.
Sultzman, Francis E., 115 N. Fifth St.
Walterschied, John H., 508 Broadway
Well, J. W., Palmyra

MERCER COUNTY
(Grand River Medical Society)

MILLER COUNTY MEDICAL SOCIETY

Allee, Warren L., Eldon
Buehler, Carl T., Jr., Eldon
Shelton, Edward O., Eldon

MINERAL AREA COUNTY MEDICAL SOCIETY
(St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve Counties)

Appleberry, Charles H., Flat River
Aubuchon, William E., Leadwood
Bugg, Andrew F., Ellington
Bull, Ben M., Ironton
Clapsaddle, Clare J., Ste. Genevieve
Cline, Harold H., Piedmont
Cresswell, George F., Potosi
Crouch, F. Richard, Farmington
Evans, Albert L., Bonne Terre
Farrar, C. B., Flat River
Foster, Jack L., Desloge
Gaebe, Harold C., Desloge
Gale, Frank W., Bismarck
Gay, George, Ironton
Grossman, Marvin, Fredericktown
Harland, R. E., Ironton
Haw, Marvin T., Jr., Bonne Terre
Hoctor, Emmett F., Farmington
Hunt, John W., Jr., Leadwood
Jones, Paul L., Flat River
Knotts, H. S., City Hospital, St. Louis
Lanning, Richard C., Ste. Genevieve
Lanning, Robert W., Ste. Genevieve
Lanzafame, S. Anthony, Farmington
Martin, James H., Ironton
Michaelis, B. A., Fredericktown
Pyrtle, James R., Centerville
Roebber, Harry M., Bonne Terre
Roesler, Paul J., Farmington
Sexauer, Arthur E., Ste. Genevieve
Slaughter, Shelby C., Fredericktown
Taylor, Byron H., Jr., Flat River
Taylor, Van Wm., Bonne Terre
Watkins, George L., Farmington
Watkins, George L., Jr., Farmington

MISSISSIPPI COUNTY
(Semo County Medical Society)

MONITEAU COUNTY MEDICAL SOCIETY

Burke, John P., Jr., 1122 Los Arboles Rd., N.W., Albuquerque, New Mexico
Fulks, Richard B., California
Kibbe, Edgar A., California
Latham, Kenyon S., California
Popejoy, H. R., California
Tarvydas, Francis, 817 Dugan St., Jefferson Barracks, Mo.

MONROE COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MONTGOMERY COUNTY MEDICAL SOCIETY

Andersen, Elmer J. T., Montgomery City
Byland, Samuel J., Wellsville
Helm, James O., New Florence
Hirsch, Albert, Middletown

MORGAN COUNTY MEDICAL SOCIETY

Gunn, Aubrey J., Versailles
Gunn, Jack, Versailles
Kauffman, Ruth, Versailles
Lyle, Robert R., Versailles
Washburn, J. Loren, Versailles

NEW MADRID COUNTY
(Semo County Medical Society)

NEWTON COUNTY MEDICAL SOCIETY

Bowman, Melvin C., Neosho
Cardwell, Clarence, Stella
Carter, James R., Neosho
Davis, Paul C., Neosho
Duemler, Thomas B., Seneca
Johnson, John J., Neosho
Lamson, Roy C., Neosho
Lentz, Harold C., Neosho
Maness, Charles E., Neosho
Reynolds, James R., Neosho
Rolens, Louis E., Granby
Taylor, Leo T., Neosho
Whitehead, Frank F., Neosho

NODAWAY-ATCHISON-GENTRY-WORTH COUNTIES MEDICAL SOCIETY

Bauman, Henry C., Maryville
Bell, Charles T., Maryville
Blacklock, David E., King City
Bloomer, Joseph A., Maryville
Byland, Benjamin F., Maryville
Carlin, Albert L., Stanberry
Carpenter, Wallace, Rock Port
Coffey, James L., Fairfax
Cossins, Carlos E., State Hospital No. 2, St. Joseph
Dean, Leslie E., Maryville
Humberd, Charles D., Barnard
Imes, Elvin D., Maryville
Jackson, William R., Maryville
Kadull, Paul J., Conception Junction
Kirk, Charlie W., Hopkins
Matteson, Frank B., Grant City
Musgrave, Paul W., Address Unknown
Niedermyer, Edward L., Tarkio
Person, Robert C., Box 457, 1775 Jumper St., Escondido, Calif.
Rose, Frank H., Albany
Ross, Pren J., Grant City
Settle, Emmett B., Rock Port
Wempe, G. Raymond, Maryville

NORTH CENTRAL COUNTIES MEDICAL SOCIETY
(Adair-Schuyler-Knox-Sullivan-Putnam)

Cramb, Arthur B., Spofford, N. H.
English, Milton T., Jr., Kirksville
Freeman, Spencer L., Kirksville
Gerwig, Henry E., Downing
Grim, George E., Kirksville
Hart, Pearl V., Coatsville
Henry, Clifford E., Kirksville
Holman, Jurney H., Unionville
Hudson, G. R., Kirksville
Humphrey, Henry M., Brashear
Jones, John B., Kirksville
Luman, Frank E., Edina
Miltenberger, Val E., Kirksville
Montgomery, John S., Milan
Nulton, Ida May, Lancaster
Stickler, Ralph O., Kirksville
Sullivan, William J., V.A. Hospital, Davis Park, Providence, R. I.
Wimp, J. J., Kirksville

OREGON COUNTY
(South Central Counties Medical Society)

OSAGE COUNTY
(Unorganized)

OZARK COUNTY
(Unorganized)

OZARKS COUNTY MEDICAL SOCIETY
(Barry-Lawrence-Stone-Christian-Taney)

Aubin, Francis W., Branson
Brasher, Charles A., Mt. Vernon
Bunten, Joseph C., Branson
Burney, Wallace S., Miller
Capetti, Alex P., Aurora
Coffman, Esther E. L., 4139a Connecticut St., St. Louis
Cohnberg, Rosellen E., Monett
Cottrell, Wilson P., Reeds Spring
Cowan, R. D., Aurora
Donley, Robert R., Monett
Edwards, Francis L., Monett
Eller, Byron H., 430 Pitsanuloka Rd., Bangkok, Thailand
Evans, Harry T., Branson
Farthing, Robert R., Ozark
Ferguson, Lewis H., Monett
Ferguson, L. H., Jr., V. A. Hospital, Alexandria, La.
Glover, Kenneth, Mt. Vernon
Graves, Arthur J., Mt. Vernon
Hellweg, Charles E., Mt. Vernon
Herron, Floyd W., Aurora
Holmes, Lemuel I., Miller
Holmes, Prince A., Mt. Vernon
Imes, Clifford H., Miller
Kerr, Frank T., Monett
Knowles, Harry P., Rockaway Beach
McCallum, A. J. C., Aurora
Magness, William C., Branson
Maples, Floyd H., Mt. Vernon
Mickel, Arthur A., Cassville
Moennighoff, Fritz J., Monett
Newman, Mary Jane, Cassville
Ramsey, Ora W., Marionville
Robertson, Robert C., St. Cloud, Minn.
Roper, Stanley D., Ozark
Russell, James M., Monett
Shumate, L. St. Clair, Reeds Spring
Spears, Charles A., Pierce City
Stokes, Julius B., Excelsior Springs
Threadgill, Jesse M., Forsyth
Wommack, Fred L., Crane

PEMISCOT COUNTY MEDICAL SOCIETY

Aquino, Philip J., Caruthersville
Beecher, Sheldon B., Caruthersville
Brown, Charles W., Caruthersville
Cain, Charles F., Caruthersville
Castles, Charles C., Caruthersville
Chapman, J. R., Steele
Cook, O. W., Caruthersville
Cooke, Francis W., Caruthersville
Cooper, Lawrence E., Cooter
Denton, Levi D., Hayti
Hensley, Daniel R., Hayti
Kaiser, Clarence D., Hayti
Lamb, Woodrow McD., Hayti
Limbaugh, Walter R., Ft. Myers, Fla.
McCoy, Warren R., Caruthersville
McKaskle, Clarence W., Caruthersville
Morris, Clyde L., Caruthersville
Phipps, George W., Caruthersville
Ricketson, George M., Hayti
Shirey, Arnold G., Hayti
Taylor, Edward L., Steele

PERRY COUNTY MEDICAL SOCIETY

Bailey, William H., Perryville
Bredall, Jerome J., Perryville
Carron, Oscar A., Perryville
Feltz, L. W., Perryville
Fischer, Theodore, Altenburg
Grayson, Richard R., Perryville
Legner, Stanley G., Perryville
Lutkewitte, Joseph F., St. Marys
Miller, Oliver J., Cape Girardeau
Quintana, Manuel M., Perryville
Riley, Fred P., Perryville
Utterman, William F., Perryville

PETTIS COUNTY MEDICAL SOCIETY
(Sedalia)

Beckemeyer, Wm. A., 120 W. 5th St.
Bess, William E., 210½ S. Ohio St.
Bishop, Wm. T., 616 W. 6th St.
Boger, James W., 120 W. 5th St.
Brady, Charles H., 205 Ilgenfritz Bldg.
Campbell, Albert J., 312½ S. Ohio St.
Cannady, J. E., 312½ S. Ohio St.
Carlisle, John B., 314 S. Ohio St.
Dyer, David P., 301 Sedalia Trust Bldg.
Edwards, D. R., 107½ S. Ohio St.
Ewert, J. O., 412½ S. Ohio St.
Gonser, Karl B., 101 S. Ohio St.
Hite, Henry A., Green Ridge
Hopkins, Thomas J., Fifth & Ohio Sts.
Lamy, John E., 509 W. Broadway Ave.
Long, Frank B., 219½ S. Ohio St.
Lowe, Alvin L., 418½ S. Ohio St.
Maddox, Albert R., 116½ W. Main St.
Monroe, Alfred E., 644 E. 70th St., Kansas City
Murray, John W., 1226 Jackson Blvd., Houston, Tex.
Osborne, Chas. D., 118 W. 3rd St.
Parkhurst, Charles L., Houstonia
Rhodes, Euhlan L., 312½ S. Ohio St.
Rodeman, John M., 219½ S. Ohio St.
Siegel, Carl D., 1216 W. 18th St.
Siegel, Peter V., Smithton
Snavely, Edmund C., 500½ S. Ohio St.
Stauffacher, C. Gordon, 101½ S. Ohio St.
Trader, Chas. B., Porter Montgomery Bldg.
Walker, William E., La Monte
Walter, Archie L., 120 W. 5th St.

PHELPS-CRAWFORD-DENT-PULASKI-MARIES COUNTIES MEDICAL SOCIETY

Breuer, Robert E., Newberg
Butts, James D., St. James
Davis, Harry H., Rolla
Dillon, William G., Salem
Doubek, John C., Jr., 1233 Laney Del Lane, Kirkwood

Drake, Avery A., Rolla
Elders, Frank A., Jr., Cuba
Everist, Guy V., Rolla
Feind, Earl E., Rolla
Hammler, Christiana V., St. James
Hart, Martin M., Salem
Herzog, Gustav G. A., Cuba
Hughes, Edgar O., Dixon
Hunt, Lloyd H., Salem
Irwin, William F., Leasburg
Kozal, Francis L., Belle
Lytle, William R., Rolla
Miller, Clyde S., Waynesville
Myers, James M., Rolla
Roock, Paul C., 4339 Marey St., Omaha, Nebr.
Russell, Barbara E., Rolla
Scott, Elijah A., St. James
Siniscal, A. A., Rolla
Stricker, Emil A., St. James
Underwood, Millard K., Rolla

PIKE COUNTY MEDICAL SOCIETY

Andrae, Robert L., Louisiana
Barrymore, Eugene, Bowling Green
Biggs, James B., Bowling Green
Cunningham, Eric A., Louisiana
Hooker, John H., Clarksville
Hunter, Fred M., Bowling Green
Johnson, Q. Ray, Jr., Louisiana
Lewellen, Charles H., Louisiana
Lewellen, Charles P., Louisiana
Scott, Clive D., Louisiana
Treadway, W. W., Silex
Wilcoxen, William B., Bowling Green

PLATTE COUNTY MEDICAL SOCIETY

Calvert, Lewis C., Weston
Durham, Silas L., Dearborn
Jennings, Ethlyn C., Parkville
Miller, Dean M., Platte City
Parker, H. Graham, Platte City
Robinson, John A., Edgerton
Underwood, Johnson, Parkville
Wilson, Robert P. C., Marshall

POLK COUNTY
(Dallas-Hickory-Polk County Medical Society)

PULASKI COUNTY
(Phelps-Crawford-Dent-Pulaski-Maries County Medical Society)

PUTNAM COUNTY
(North Central Counties Medical Society)

RALLS COUNTY
(Marion-Ralls-Shelby County Medical Society)

RANDOLPH COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

RAY COUNTY
(Lafayette-Ray County Medical Society)

REYNOLDS COUNTY
(Mineral Area County Medical Society)

RIPLEY COUNTY
(Butler-Ripley-Wayne County Medical Society)

ST. CHARLES COUNTY
(Lincoln-St. Charles County Medical Society)

ST. CLAIR
(West Central Counties Medical Society)

ST. FRANCOIS
(Mineral Area County Medical Society)

STE. GENEVIEVE
(Mineral Area County Medical Society)

ST. LOUIS MEDICAL SOCIETY
(St. Louis)

Abell, Walter E., 2253 S. 39th St. (10)
Abrams, Morris, 4405 West Pine Blvd. (8)
Ackerman, Lauren B., 600 S. Kingshighway Blvd. (10)
Adler, Benard C., 887 Alanson Dr., (24)
Agress, Harry, 1045 Missouri Theatre Bldg. (3)
Aitken, Louis F., 732 Beaumont Medical Bldg. (8)
Albrecht, Franklin H., 505 University Club Bldg. (3)
Alden, Arthur M., 520 Frisco Bldg. (1)
Aldrich, James T., 2607a Franklin Ave. (6)
Alexander, Harry L., 4952 Maryland Ave. (8)
Alford, Leland B., 536 University Club Bldg. (3)
Allen, Duff S., 10 Oakleigh Lane (5)
Allen, Henry C., 212 Clayton Medical Bldg. (5)
Allen, Hollis N., 817 Missouri Theatre Bldg. (3)
Allen, Melvin A., 3701 Grandel Sq. (8)
Allen, Willard M., 630 S. Kingshighway Blvd. (10)
Allen, William E., Jr., 720 N. Sarah St. (8)
Althaus, Carl J., 5 Lister Bldg. (8)
Altheide, J. Paul, 714 University Club Bldg. (3)
Alvis, Bennett Y., 903 Carleton Bldg. (1)
Alvis, Edmund B., 903 Carleton Bldg. (1)
Amacker, Dempsey T., 4569 Laclede Ave., (8)
Ambrose, Olney A., 932 Beach Ave. (12)
Andrews, Raleigh K., 235 Beaumont Medical Bldg. (8)
Anstey, George, 1222 Missouri Theatre Bldg. (3)
Arneson, A. N., 457 N. Kingshighway Blvd. (8)
Arney, William G., 16 Hampton Village Plaza (9)
Arnold, Eugene L., 8700 Partridge Ave. (15)
Aronberg, Lawrence M., 4950 Lindell Blvd. (8)
Arzt, Franz, 6 Ladue Acres (24)
AufderHeide, G. Russell, 4570 Fair Ave. (15)
Austin, Martin G., 1515 Lafayette Ave. (4)
Ayars, Treston R., 817 University Club Bldg. (3)
Baber, John C., Jr., 923 Spruce St., Little Rock, Ark.
Bagby, James W., 414 Beaumont Medical Bldg. (8)
Bailey, Frank A., 3108 S. Grand Blvd. (18)
Bailey, Fred W., 1147 16th Ave., N., St. Petersburg, Fla. (6)
Baker, Cecil G., Vets. Adm. Hosp., Iowa City, Iowa
Baker, Cecil H., 816 Missouri Theatre Bldg. (3)
Baker, William M., 3133 Hawthorne Blvd. (4)
Banet, Samuel R., 457 N. Kingshighway Blvd. (8)
Bardenheier, J. Phil, 602 Wall Bldg. (8)
Barker, Jesse W., 1504 S. Jefferson Ave. (4)
Baron, William, 3601 S. Jefferson Ave. (18)
Barrett, Ralph M. S., 432 S. Hanley Rd. (5)
Barrett, Scott R., 1409 N. Euclid Ave. (13)
Bartels, Leo, 205 Frisco Bldg. (1)
Bartlett, Robert W., 929 University Club Bldg. (3)
Bartlett, Willard, Jr., 945 Missouri Theatre Bldg. (3)
Bartnick, Mitchel L., 3895 Holly Hills (16)
Bassett, John W., U.S.S. Consolation, FPO (AN-15), San Francisco, Calif.
Bassett, Robert B., 5427 Delmar Blvd. (12)
Bauer, John D., 2415 N. Kingshighway Blvd. (13)
Bauer, Louis, 2646 Gravois Ave. (18)
Bauman, Charles M., 1106 Chemical Bldg. (1)
Baumgarten, Walter, Jr., 912 Beaumont Medical Bldg. (8)
Bawell, Malcolm B., 59 Aberdeen Pl. (5)
Beare, J. Byron, 401 Beaumont Medical Bldg. (8)
Becke, William G., 912 Beaumont Medical Bldg. (8)
Becker, Edward J., 205 Frisco Bldg. (1)
Becker, George H., 210 Lister Bldg. (8)
Beckette, Edmund S., 320 Lister Bldg. (8)
Beckham, Genevieve S., 4950 Walsh Ave. (9)
Beem, John R., 4027 Ashland Ave. (7)
Behrens, Donald T., 4644 Lee Ave. (15)
Beisbarth, Albert, 403 S. Side Nat. Bank Bldg. (16)
Beisbarth, Carl C., 801 Beaumont Medical Bldg. (8)
Bell, Robert M., 640 Beaumont Medical Bldg. (8)
Benincasa, Anthony V., 3731 Goodfellow Blvd. (20)
Benjamin, Durand, 7430 Virginia Ave. (11)
Berard, Louis N., 984 Arcade Bldg. (1)
Berg, Ralph, 3203 S. Grand Blvd. (18)
Bergman, Hugo F., 203 Beaumont Medical Bldg. (8)
Bergner, Grace E., 114 N. Taylor Ave. (8)
Berland, Harry I., 996 Arcade Bldg. (1)
Berman, Joseph P., 7452 University Dr. (5)
Berman, William, 462 N. Taylor Ave. (8)
Berry, John W., 7265 Lindell Blvd. (5)
Bersche, Bertram L., 5214 Pernod Ave. (9)
Bettonville, Paul J., Jr., 7563 York Dr. (5)
Bieri, Earl J., 633 Metropolitan Bldg. (3)
Bierman, Max John, 245 Crandon Dr. (24)
Bilotta, Laurence A., Orlando Air Force Base, Orlando, Fla.
Bilsky, Nathan, 2739 N. Grand Blvd. (6)
Bindbeutel, Arthur H., 3953 Holly Hills Blvd. (16)
Bindbeutel, D. A., 5005th Hospital, A.P.O. 949, Seattle, Wash.
Birdsall, Thomas C., 4660 Maryland Ave. (8)
Birsner, Louis J., 1232 Missouri Theatre Bldg. (3)
Bisno, Daniel, 310 Lister Bldg. (8)
Blache, J. Owen, 4924 Lotus Ave. (13)
Black, James M., 705 N. Kingshighway Blvd. (8)
Black, William D., 1204 Louderman Bldg. (1)
Blair, Vilray P., Rte. No. 1, Box 423, Florissant, Mo.
Blair, Vilray P., Jr., 502 Beaumont Medical Bldg. (8)
Bleyer, Adrien S., 819 University Club Bldg. (3)
Block, Arnold S., 1041 Missouri Theatre Bldg. (3)
Bock, L. H., 1504 S. Grand Blvd. (4)
Bockelman, Clifford H., 2615 Brentwood Blvd. (17)
Boedeker, Roy V., 453 N. Taylor Ave. (8)
Boemer, L. C., 517 Beaumont Medical Bldg. (8)
Bohne, William R., 117 Lister Bldg. (8)
Bohrer, Harry C., 315 University Club Bldg. (3)
Boldizar, A. G., 1002 Beaumont Medical Bldg. (8)
Boldt, Thomas H., 6111 Pershing Ave. (12)
Bondurant, Bryce H., 207 Beaumont Medical Bldg. (8)
Bowdern, Edward H., 16 Sussex Dr. (17)
Bowerman, Harold H., 823 University Club Bldg. (3)
Bowersox, Warren A., 400 Lister Bldg. (8)
Boyd, Arthur M., 1703 S. Grand Blvd. (4)
Bradley, Frank R., 600 S. Kingshighway Blvd. (10)
Bremser, Harry L., 4266 Manchester Ave. (10)
Brennan, J. Anthony, State Hospital No. 4, Farmington
Brennan, Robert A., 5417 S. Grand Blvd. (11)
Brennan, Robert V., 9300 Watson Rd. (19)
Brereton, Robert L., Route 2, Chesterfield
Bricker, Eugene M., 457 N. Kingshighway Blvd. (8)
Britt, Robert E., 816 Missouri Theatre Bldg. (3)
Brockelmann, Emmy Ross, 1918 E. Grand Ave. (7)
Brockelmann, Erich, 719 Metropolitan Bldg. (3)
Brodeur, Armand E., 2417 Hemlock Dr., Falls Church, Va.
Bromberg, Leon, 542 Missouri Theatre Bldg. (3)
Brookes, Henry S., Jr., 37 Algonquinwood Pl. (19)
Brookes, Robert D., 411 Beaumont Medical Bldg. (8)
Brooks, Arthur C., 60 Kingsbury Pl. (12)
Broun, Goronwy O., 1325 S. Grand Blvd. (4)
Brown, Daniel W., 11 N. Jefferson Ave. (3)
Brown, E. Eugene, 419 Wall Bldg. (8)
Brown, James B., 400 Metropolitan Bldg. (3)
Brown, Seymour, 7553 Gannon Ave. (5)

Bruce, Helen L., 3263 Hawthorne Blvd. (4)
Bryan, James H., 330 Beaumont Medical Bldg. (8)
Bryan, Theodore L., U. S. Army Hosp., Camp Atterbury, Ind.
Bryan, William T. K., 330 Beaumont Medical Bldg. (8)
Bublis, Mary D., Vets. Adm. Hosp., Temple, Texas
Bublis, Norbert J., Vets. Adm. Hosp., Temple, Texas
Buddy, E. P., 405 University Club Bldg. (3)
Bulger, Harold A., 4405 West Pine Blvd. (8)
Burford, Cyrus E., 958 Arcade Bldg. (1)
Burford, E. Humber, 958 Arcade Bldg. (1)
Burke, Robert J., U.S.A.F. (MC) Scott Air Force Base, Ill.
Burns, Francis J., 4660 Maryland Ave. (8)
Burns, Stanley S., 823 Missouri Theatre Bldg. (3)
Burns, Stanley S., Jr., 300 Gill Ave. (22)
Burst, Donald O., 6757 Plainview Ave. (9)
Burst, Emil A., 1901 Cherokee St. (18)
Busch, Anthony K., 5300 Arsenal St. (9)
Butcher, Harvey R., Jr., 600 S. Kingshighway Blvd. (10)
Byars, Louis T., 400 Metropolitan Bldg. (3)
Byrne, John E., 4936a Nottingham Ave. (9)
Byrns, Robert E., 3804 N. Grand Blvd. (7)
Calkins, Delevan, 8505 Delmar Blvd. (24)
Calodney, Martin M., 205 Lister Bldg. (8)
Cameron, Solon, 719 Metropolitan Bldg. (3)
Campbell, Cecil S., 952 Arcade Bldg. (1)
Campos, F. J., 405 Lister Bldg. (8)
Cannon, Edward M., 714 University Club Bldg. (3)
Cappel, Powel B., 3284 Ivanhoe Ave. (9)
Caravelli, Anthony F., 607 N. Grand Blvd. (3)
Carney, Joseph E., 525 Frisco Bldg. (1)
Carr, Archie D., 215 Beaumont Medical Bldg. (8)
Carrier, John A., 5840 Staley Ave. (23)
Carroll, George A., 304 University Club Bldg. (3)
Carroll, Grayson, 609 Humboldt Bldg. (3)
Casberg, Melvin A., Armed Forces Med. Policy Council, Washington, D. C.
Casey, Edwin J., 425 Metropolitan Bldg. (3)
Cason, Elbert H., 3606 Gravois Ave. (16)
Cassel, Melvin A., 2801 N. Taylor Ave. (15)
Cassidy, Leslie D., 4952 Maryland Ave. (8)
Carleton, Charles E., Jr., 1515 Lafayette Ave. (4)
Catanzaro, Anthony F., 6525 Itaska Ave. (9)
Cavender, Savino W., Address Unknown
Chamness, James T., 3 Town & Country Dr. (24)
Chapman, Arthur H., Public Health Service Hosp., Fort Worth 1, Texas
Charles, Benjamin H., 912 Beaumont Medical Bldg. (8)
Charles, Cecil M., 1027 Beaumont Medical Bldg. (8)
Charnas, Raymond M., 727 Missouri Theatre Bldg. (3)
Cherre, Charles J., U. S. Marine Hosp., Norfolk, Va.
Chieffi, Margaret, 735 Beaumont Medical Bldg. (8)
Ciapciak, Stanley J., 1901 Madison Ave. (6)
Clancy, James F., 424 University Club Bldg. (3)
Claridge, Ralph A., 7059 Deerpath Dr. (23)
Clark, J. Fred W., 864 Hamilton Ave. (12)
Cleary, Frank, 1935 Park Ave. (4)
Cleveland, Horace F., 1325 Somerset Pl., Long Beach, Calif. (7)
Clithero, W. Harvey, 906 Carleton Bldg. (1)
Coates, Thomas A., 5203 Chippewa St. (9)
Coffin, Ernest L., Portage, Maine
Cohen, Benjamin H., 15 N. Brentwood Blvd. (5)
Cohen, Louis, 318 Lister Bldg. (8)
Collodi, George A., 3828 DeTonty St. (10)
Connor, John J., 433 Metropolitan Bldg. (3)
Conrad, Adolph H., 512 Beaumont Medical Bldg. (8)
Conrad, Adolph H., Jr., 512 Beaumont Medical Bldg. (8)
Conrad, Marshall B., 5437 Cabanne Ave. (12)
Cook, James T., 5536 Robin Ave. (20)
Cook, Jerome E., 4409 West Pine Blvd. (8)
Cook, Ralph L., 423 Metropolitan Bldg. (3)
Cooper, Henry T., 1115 Paul Brown Bldg. (1)
Copher, Glover H., 602 S. Euclid Ave. (10)
Cordonnier, Justin, 315 Beaumont Medical Bldg. (8)
Cornell, John C., 5005a Gravois Ave. (16)
Correnti, Nicholas A., 453 N. Taylor Ave. (8)
Cory, Harriet Stevens, 6157 Pershing Ave. (12)
Costa, Dominic V., 16 Hampton Village Plaza (9)
Costello, Cyril J., 1515 Lafayette Ave. (4)
Costello, Joseph P., 4952 Maryland Ave. (8)
Costello, Joseph P., Jr., 828 Queen Anne Ave. (22)
Costen, James B., 722 Beaumont Medical Bldg. (8)
Coughlin, Bertrand D., 333 Metropolitan Bldg. (3)
Creane, John C., 2504 N. 14th St. (6)
Crego, Clarence H., Jr., 204 Humboldt Bldg. (3)
Crossen, Robert J., 903 University Club Bldg. (3)
Crossman, Robert W., 514 University Club Bldg. (3)
Crowell, Hugh C., 8818 Gravois Ave. (23)
Cummings, James H., 424 N. Euclid Ave. (8)
Cutler, Harold M., 1018 Beaumont Medical Bldg. (8)
Czebrinski, Edward W., 3701 Grandel Sq. (8)
Daake, John W., 3817 Flora Pl. (10)
Dahms, Gustave, 1452 S. Grand Blvd. (4)
Dalton, Arthur R., 207 Lister Bldg. (8)
Daman, George A., 5203 Chippewa St. (9)
Danis, Peter G., 734 Missouri Theatre Bldg. (3)
Davie, Joseph, 406 Frisco Bldg. (1)
Davis, Frank L., 620 University Club Bldg. (3)
Davis, Martin W., 408 Humboldt Bldg. (3)
Davis, Myron W., 718 Beaumont Medical Bldg. (8)
Davis, Thomas M., 2424 N. Grand Blvd. (6)
Day, Anthony B., 411 Beaumont Medical Bldg. (8)
Deakin, Rogers, 723 University Club Bldg. (3)
Demko, Frank, 1321 S. Broadway (4)
Demko, William, 3450 Gravois Ave. (18)
Denk, Albert A., 7216 Natural Bridge Rd. (21)
Depew, Heber B., 1446 S. Grand Blvd. (4)
Deppe, Arthur H., 835 University Club Bldg. (3)
Devine, John B., 16 Hampton Village Plaza (9)
DeWitt, Robert H., 7805 Utica Ave. (14)
Diehr, Alvin H., 845 Missouri Theatre Bldg. (3)
Dileo, Senatro W., 412 Humboldt Bldg. (3)
Dmytryk, Eugene T., 518 University Club Bldg. (3)
Dorsett, E. Lee, 729 Missouri Theatre Bldg. (3)
Doubek, John C., 2767 Gravois Ave. (18)
Doyle, Charles R., 422 Missouri Theatre Bldg. (3)
Doyle, Raymond E., 3102a S. Grand Blvd. (18)
Drace, Charles C., 3702 Gravois Ave. (16)
Drace, Charles C., Jr., 19 E. Lockwood Ave. (19)
Drake, Truman G., 114 N. Taylor Ave. (8)
Drews, Leslie C., 516 Metropolitan Bldg. (3)
Drey, Norman W., 916 University Club Bldg. (3)
Dreyer, Carl J., 204 Kingsville Ct. (19)
Dripps, Roy C., 7702 Ivory Ave. (11)
Drum, Clarence G., 1927a N. Union Blvd. (13)
Duden, Charles W., 1011 Beaumont Medical Bldg. (8)
Duemler, John H., 1504 S. Grand Blvd. (4)
Duggan, John J., Jr., 7847 Wayne Ave. (14)
Dworkin, Saul, 1657 S. Grand Blvd. (4)
Dyer, Dallas J., 16 Hampton Village Plaza (9)
Eades, Dee W., 12 Kingsbury Pl. (12)
Earp, Ralph K., 912 Beaumont Medical Bldg. (8)
Eastwood, Douglas W., 600 S. Kingshighway Blvd. (10)
Eber, Carl T., 1010 Carleton Bldg. (1)
Eberle, John P., 3510 Medical Group, Randolph A.F.B., Texas
Eberle, Vincent L., 4952 Maryland Ave. (8)
Echterhoff, Harry R., 945 Missouri Theatre Bldg. (3)
Eck, Birkle, 19 Deercreek Woods (5)
Eck, Peter A., 19 Deercreek Woods (5)
Eckert, Charles L., 600 S. Kingshighway Blvd. (10)
Eckert, Clarence T., 601 Humboldt Bldg. (3)
Ecklund, Archibald M., U.S.S. Repose (AH 16), F.P.O. San Francisco, Calif.
Edele, Eugene H., 4971 Chippewa St. (9)
Edgerton, Winfield D., address unknown
Edwards, Joseph C., 1018 Beaumont Medical Bldg. (8)
Efron, Joseph, 800 Fairdale Ave., Rock Hill, Mo.
Egley, Loren E., 67 Frederick Lane (22)
Eidelman, Jack R., 462 N. Taylor Ave. (8)
Eidmann, Walter P., 3146 Morganford Rd. (16)
Eigel, Edwin G., 3211 S. Grand Blvd. (18)
Eimer, Charles E., 462 N. Taylor Ave. (8)
Eisele, William M., 444 East 68th St., New York, N. Y.
Eiseman, Ben, 600 S. Kingshighway Blvd. (10)
Elam, James O., 600 S. Kingshighway Blvd. (10)
Ellersieck, Dorothy M., 10695 Bellefontaine Rd. (15)
Elliott, Gladden V., 510 S. Kingshighway Blvd. (10)
Ellis, Sam T., 1609 Harrison Hill, Hannibal, Mo.
Elman, Robert, 600 S. Kingshighway Blvd. (10)
Elmer, Warren P., 601 University Club Bldg. (3)
Emerson, Reynolds L., 5427 Delmar Blvd. (12)
Emmert, Frederick V., 713 Metropolitan Bldg. (3)
Engman, Martin F., 601 Beaumont Medical Bldg. (8)
Engman, Martin F., Jr., 601 Beaumont Medical Bldg. (8)
Epp, George J., 3807 Bowen St. (16)
Erlanger, Joseph, 4580 Scott Ave. (10)
Ernst, Edwin C., 100 Beaumont Medical Bldg. (8)
Ernst, Edwin C., Jr., 100 Beaumont Medical Bldg. (8)
Ernst, Roland P., 3720 Washington Blvd. (8)
Eskeles, Irwin H., 4500 Olive St. (8)
Esker, George, 5600 Arsenal St. (9)
Esslinger, Arthur T., 457 N. Kingshighway Blvd. (8)
Eto, Jackson, 634 N. Grand Blvd. (3)
Evans, Fred L., 9039 Stanford Ave., Castro Valley, Calif.
Eversoll, Norton J., 6356 Clayton Rd. (17)
Eyermann, Charles H., 1102 Missouri Theatre Bldg. (3)
Falk, O. P. J., 3 Southmoor Dr. (5)
Farley, William W., 3108 S. Grand Blvd. (18)
Farr, A. L., 1027 Beaumont Medical Bldg. (8)
Farrar, John T., 44 Fairfax St., West Newton, Mass.
Farrell, Robert J., 624 N. Union Blvd. (8)

Farris, William Walker, 3505 N. Grand Blvd. (7)
Feinstein, Leon A., 705 Olive St. (1)
Feldaker, Mauri, 20-1st Ave., N. E., Rochester, Minn.
Feldman, David, Asaka Army Hospital, 8009th A.U., A.P.O. 1007, San Francisco, Calif.
Feller, Harold H., 2739 N. Grand Blvd. (7)
Fellhauer, Carl M., 6455 Lansdowne Ave. (9)
Fijan, Kenneth J., 1730 S. 48th St., Lincoln, Nebr.
Fineberg, Maxwell, 301 University Club Bldg. (3)
Finnegan, Frank R., 201 Humboldt Bldg. (3)
Finnegan, Joseph V., 633 Metropolitan Bldg. (3)
Fischer, Erich, 10 Pasteur Bldg. (8)
Fischer, Harry W., 515 Lake Ave. (19)
Fish, Virgil O., 1114 Missouri Theatre Bldg. (3)
Fisher, Arthur O., 816 Beaumont Medical Bldg. (8)
Fitzgerald, Leo P., 6677 Delmar Blvd. (5)
Flader, Otto F., 6027 Margaretta Ave. (20)
Flance, Israel J., 901 Beaumont Medical Bldg. (8)
Flavan, David B., 401 Humboldt Bldg. (3)
Fleishman, Alfred, 462 N. Taylor Ave. (8)
Fletcher, Paul F., 517 Missouri Theatre Bldg. (3)
Flotte, Bernard H., 2435 N. Grand Blvd. (6)
Flynn, Edward P., 1515 Lafayette Ave. (4)
Flynn, John T., 1715 S. 39th St. (10)
Flynn, Joseph E., 1695 S. Brentwood Blvd. (17)
Forbes, Kenneth A., Letterman Army Hospital, San Francisco, Calif.
Ford, Lee T., Jr., 4952 Maryland Ave. (8)
Forsen, James A., 401 Wall Bldg. (8)
Forster, A. F., 5001st Medical Gp., A.A.C., A.P.O. 731, Seattle, Wash.
Forster, Armand C., 1504 S. Grand Blvd. (4)
Forti, John J., 4703 Carter Ave. (15)
Foster, Howard M., 5059a St. Louis Ave. (15)
Foster, Leon, 727 Missouri Theatre Bldg. (3)
Fox, Leon J., 420 Missouri Theatre Bldg. (3)
Fox, Robert E., 539 N. Grand Blvd. (3)
Frank, Adolph M., 3701 Grandel Sq. (8)
Frankel, Sol I., 2621 S. Jefferson Ave. (18)
Frankenthal, Maurice A., 200 Lister Bldg. (8)
Franklin, Max S., 727 Missouri Theatre Bldg. (3)
Freedman, Harold, 717 University Club Bldg. (3)
Freedman, Ruth S., 323 Clara Ave. (12)
Freeman, David M., 7316 Kingsbury Ave. (5)
Freimuth, L. E., 217 University Club Bldg. (3)
Frerking, Herbert W., 5535 Delmar Blvd. (12)
Freund, Newton M., 4605 Lindell Blvd. (8)
Freund, Samuel J., 4409 West Pine Blvd. (8)
Friedman, Bernard, Robert Koch Hospital, Koch, Mo.
Fries, Armand D., 974 Arcade Bldg. (1)
Fries, John William, 1421 Eddystone Pl. (19)
Fries, William A., 3840a Fillmore Ave. (16)
Friskel, Arthur K., 7422 Devonshire Ave. (19)
Fritschel, G. C., 3306 S. 13th St. (18)
Fryer, Minot P., 400 Metropolitan Bldg. (3)
Funsch, Edwin C., 4101 Laclede Ave. (8)
Funsch, Robert E., 903 Meridan, Shelbyville, Ind.
Furlow, Leonard T., 530 Beaumont Medical Bldg. (8)
Gafney, George T., 1232 Missouri Theatre Bldg. (3)
Gaines, John F., Rt. 3, Box 392, Oklahoma City, Okla.
Gale, Philip R., 125 Orchard Ave. (19)
Galeno, William A., U. S. Naval Hospital, Mare Island, Vallejo, Calif.
Gallagher, John F., 313 Wall Bldg. (8)
Gallagher, William J., 7214 Greenway Ave. (5)
Gansloser, Maximilian W., 3624 Arsenal St. (16)
Gansloser, Wilbert M., 6376 Clayton Rd. (17)
Gay, Lee Pettit, 440 Missouri Theatre Bldg. (3)
Gerst, Aloysius C., B. O. 2—202 Long Beach Naval Station, Long Beach, Calif.
Gerwitz, Bernard W., 16 Hampton Village Plaza (9)
Gibson, Helen F., 903 Carleton Bldg. (1)
Gildea, Edwin F., 640 S. Kingshighway Blvd. (10)
Gildea, Margaret C. L., 4500 West Pine Blvd. (8)
Gillespie, William J., 7522 Harter Ave. (17)
Gissy, Charles J., 617 Metropolitan Bldg. (3)
Glaser, Martin J., 420 Miss. Valley Trust Bldg. (1)
Glassberg, Bertrand Y., 212 Lister Bldg. (8)
Glenn, Joseph E., 958 Arcade Bldg. (1)
Glennon, William P., 634 University Club Bldg. (3)
Glick, Harry N., 1504 S. Grand Blvd. (4)
Gnade, Albert J., 3606 Gravois Ave. (16)
Goebel, Joan M., No. 9, Tuscany Park (5)
Goldenson, Max J., 433 Metropolitan Bldg. (3)
Goldfarb, Alvin, 457 N. Kingshighway Blvd. (8)
Goldman, Alfred, 1215 Missouri Theatre Bldg. (3)
Goldman, Melvin L., 1215 Missouri Theatre Bldg. (3)
Gootee, Thomas H., 4567 Laclede Ave. (8)
Gorla, Wayne O., 202 Lindell Trust Bldg. (6)
Gottlieb, Leo, 457 N. Kingshighway Blvd. (8)
Gottschalk, Helen R., Nat'l Inst. of Mental Health, U.S.P.H.S., Bethesda, Md. 14)
Gradwohl, R. B. H., 3514 Lucas Ave. (3)
Graham, Evarts A., 602 S. Euclid Ave. (10)
Graneto, Joseph A., 5521 S. Broadway (11)
Grant, Samuel B., 114 N. Taylor Ave. (8)
Graul, Elmer G., 2838 S. Grand Blvd. (18)
Graul, Walter P., 912 Beaumont Medical Bldg. (8)
Grebel, Clement B., 1402 S. Grand Blvd. (4)
Greditzer, Arthur S., 4500 West Pine Blvd. (8)
Greiner, Theodore, 7507 Washington Ave. (5)
Grindon, Joseph, Jr., 501 Humboldt Bldg. (3)
Grody, Marvin H., 1515 Lafayette Ave. (4)
Grogan, F. M., 4166 Flora Blvd. (10)
Gross, Joseph L., 401 Humboldt Bldg. (3)
Grueb, Paul M., 3402a California Ave. (18)
Gruenfeld, Gerhard E., 201 Lister Bldg. (8)
Guccione, Joseph B., 8515 Colonial Lane (24)
Gulick, Charles R., 235 Beaumont Medical Bldg. (8)
Gum, William R., 2227 S. Broadway (4)
Gummels, Belmont B., 1116 McCausland Ave. (17)
Gundlach, Arthur, 2202 University St. (7)
Gunn, Walter T., 4617 Dahlia Ave. (16)
Gzell, Ronald, 5189 Kensington Ave. (8)
Hackmeyer, Rubin, 4703a Virginia Ave. (11)
Haddock, James N., 1348 Pinetree Lane (19)
Haffner, Heinz, 3720 Washington Blvd. (8)
Hagebusch, Omer E., 3714 Washington Ave. (8)
Hager, Victor K., 4922a Hampton Ave. (9)
Hall, Andy, Jr., 301 University Club Bldg. (3)
Hall, Lee A., 504 Missouri Theatre Bldg. (3)
Hall, Preston C., 3902 Lafayette Ave. (10)
Hall, Robert A., 43 Washington Ter. (12)
Hall, Willis, 5219 Delmar Blvd. (8)
Hamilton, Eugene G., 8505 Delmar Blvd. (24)
Hamilton, William P., 24 Gast Pl. (15)
Hammond, John J., 833 Missouri Theatre Bldg. (3)
Hampton, Stanley F., 1018 Beaumont Medical Bldg. (8)
Hanford, Charles W., Qtrs. 3022 B, Camp Carson, Colo.
Hanford, Wesley W., 601 University Club Bldg. (3)
Hankin, Norman M., 16 Hampton Village Plaza (9)
Hanlon, C. Rollins, 1325 S. Grand Blvd. (4)
Hansel, French K., 1222 Missouri Theatre Bldg. (3)
Hanser, S. Albert, 901 Arcade Bldg. (1)
Hanser, Theodore H., 3701 Grandel Sq. (8)
Hardesty, John F., 706 Missouri Theatre Bldg. (3)
Hardy, Joseph A., Jr., 4952 Maryland Ave. (8)
Harell, Alex, 216 Wall Bldg. (8)
Harkins, William B., 218 Beaumont Medical Bldg. (8)
Harmann, Martin F., 206 Lindell Trust Bldg. (6)
Harris, Charles W., 5298a Page Blvd. (13)
Harris, Downey L., 706 Metropolitan Bldg. (3)
Harris, Irwin J., 7427 Bland Dr. (5)
Harris, Solon P., 6826 Natural Bridge Rd. (20)
Harrison, Lee B., 601 University Club Bldg. (3)
Harting, Hugh R., Mather Field Hosp., Sacramento, Calif.
Harman, Howard E., 5417 Christy Blvd. (16)
Hartman, Paul T., 6376 Clayton Rd. (17)
Hartmann, Alexis F., 500 S. Kingshighway Blvd. (10)
Hartnett, Dalton C., 422 Missouri Theatre Bldg. (3)
Hartnett, Leo J., 422 Missouri Theatre Bldg. (3)
Hartwig, John A., 2807 N. Grand Blvd. (7)
Haskins, Arthur L., 630 S. Kingshighway Blvd. (10)
Hassett, Henry A., 618 University Club Bldg. (3)
Hawk, Bray O., 4660 Maryland Ave. (8)
Hawker, William D., 16 Hampton Village Plaza (9)
Hawkins, George L., Jr., 625 University Club Bldg. (3)
Hayden, Loyola F., 730 Hodiamont Ave. (12)
Haynes, Pugh, Jr., 203 Beaumont Medical Bldg. (8)
Healey, Robert J., 1515 Lafayette Ave. (4)
Heaney, Robert P., 1515 Lafayette Ave. (4)
Heideman, Alvah G., 723 Metropolitan Bldg. (3)
Heifetz, Carl J., 457 N. Kingshighway Blvd. (8)
Heinbecker, Peter, 600 S. Kingshighway Blvd. (10)
Heinemann, Sol, 306 Humbolt Bldg. (3)
Helbing, Harry H., 7546 Ethel Ave. (17)
Henderlite, John W., 301 Lister Bldg. (8)
Henke, Charles F., 3109 S. Grand Blvd. (18)
Hennelly, John J., 16 Hampton Village Plaza (9)
Hennerich, Walter E., 5670 Arsenal St. (9)
Henschel, Eugene V., 6200 Hoffman Ave. (9)
Herdener, Russell L., 1612 N. Eddy St., Grand Island, Nebr.
Herman, Morris, 3701 Grandel Sq. (8)
Herrick, Harold C., 5747 Bartmer Ave. (12)
Hewitt, Walter R., 7649 Delmar Blvd. (5)
Heyer, Oscar C., 8015 S. Broadway (11)
Hickey, Robert F., 916 Missouri Theatre Bldg. (3)
Hildreth, H. Rommel, 1030 Beaumont Medical Bldg. (8)

Hill, Roland, 205 Fourth Ave., N. E., St. Petersburg, Fla.
Hillenbrand, H. Melvin, 1402 S. Grand Blvd. (4)
Hines, Arthur A., 10695 Bellefontaine Rd. (15)
Hobart, Carl A., 3601a Gravois Ave. (16)
Hoefer, Walter H. V., 3108 S. Grand Blvd. (18)
Hoffmann, A. David, 6222 Delor St. (9)
Hofmeister, Rudolph, 3958 S. Grand Blvd. (18)
Hofstatter, Leopold, 4500 Olive St.
Hofstatter, Lilli, 10053 Lakeside Dr. (23)
Holden, Raymond F., 411 Beaumont Medical Bldg. (8)
Holdenried, William E., 4131 Tholozan Ave. (16)
Hollo, Vencel W., 4960 Laclede Ave. (8)
Holt, Earl P., Jr., 5444 Clemens Ave. (12)
Homan, J. S., 4903 Delmar Blvd. (8)
Honich, Nicholas J., 8902 Riverview Blvd. (21)
Hooss, Albert, 2333a S. Grand Blvd. (4)
Hopkins, Thomas A., 4411 Forest Park Ave. (8)
Horner, John L., 114 N. Taylor Ave. (8)
Horwitz, Irwin B., 504 Metropolitan Bldg. (3)
Hosto, Leland E., 4909 Lindenwood Ave. (9)
Houston, Vincent T., 106 S. Central Ave. (5)
Hrdlicka, Victor E., 818 Metropolitan Bldg. (3)
Huber, Erwin T., 913 Missouri Theatre Bldg. (3)
Huber, Melvin J., 737 Missouri Theatre Bldg. (3)
Huck, Richard F., Jr., Ohio State University, Columbus, Ohio
Huckstep, Robert A., U. S. Public Health Service Hospital, Fort Worth, Texas
Huggins, Albert M., 1515 Lafayette Ave. (4)
Hulbert, Bernard, 614 Beaumont Medical Bldg. (8)
Hummel, Anton J., 416 Metropolitan Bldg. (3)
Hurford, Phelps G., 417 Wall Bldg. (8)
Hutchinson, James H., Jr., 114 N. Taylor Ave. (8)
Hutto, A. Herman, 105 Lister Bldg. (8)
Hutton, Joseph Lewis, 902 S. Side Nat. Bank Bldg. (16)
Hyman, Anna, 5400 Arsenal St. (9)
Hyndman, Charles E., 714 Beaumont Medical Bldg. (8)
Inkley, John J., 4021 Flora Pl. (10)
Israel, Milton R., 311 Hillside Ave. (19)
Ittner, George W., Jr., 901 Beaumont Medical Bldg. (8)
Jacobs, Charles C., 878 Melvin St.
James, Norman A., 9903 Diamond Dr. (15)
James, William M., 1030 Beaumont Medical Bldg. (8)
Janney, James G., Jr., 35 N. Central Ave. (5)
Jaudon, Joseph C., 46 Glen Road (19)
Javaux, Everett J., 405 University Club Bldg. (3)
Jean, J. Ted, 4500 West Pine Blvd. (8)
Jensen, J. Ernest, 1140 Missouri Theatre Bldg. (3)
Jesgar, William, 5647 Delmar Blvd. (12)
Johnson, Charles H., 4148 Federer Pl. (16)
Johnson, Mitchell D., 40 N. Florissant Rd. (21)
Johnstone, John, Jr., 1011 Beaumont Medical Bldg. (8)
Jolly, Benjamin N.. 322 Beaumont Medical Bldg. (8)
Jones, Andrew B., 322 Beaumont Medical Bldg. (8)
Jones, Grey, 215 Lister Bldg. (8)
Jones, Otey S., 3616 S. Broadway (18)
Jones, Richard A., 332 Calvert Ave. (19)
Jones, Vincent L., 645 Missouri Theatre Bldg. (3)
Jones, William E., 110 S. Central Ave. (15)
Jordan, Edward J., 1504 S. Grand Blvd. (4)
Jordan, Walter R., 3903 Olive St. (8)
Jorstad, Louis H., 411 Beaumont Medical Bldg. (8)
Joseph, Donald J., Brooke Army Hosp., Ft. Sam Houston, Texas
Joslyn, Harold L., 521 Missouri Theatre Bldg. (3)
Jost, Charles A., 6000 W. Florissant
Jost, William E., 310 Metropolitan Bldg. (3)
Judy, Joseph D., 212 S. Florissant Rd. (21)
Jungk, Carl G. W., 2278 S. Jefferson Ave. (4)
Kane, Clyde E., 706 Walton Ave. (8)
Kane, R. Emmet, 1117 N. Grand Blvd. (6)
Kaplan, Albert, 726 Country Club Dr. (21)
Kappesser, Netajean Broome, 7044 Lindell Blvd. (5)
Kappesser, Roland C., 7044 Lindell Blvd. (5)
Karandjeff, A. D., 811 Metropolitan Bldg. (3)
Karl, Michael M., 912 Beaumont Medical Bldg. (8)
Kaskie, Clifford R., 35 N. Central Ave. (5)
Katz, Samuel D., 825 Midland Ave. (5)
Keating, John U., 210 State St., New Orleans, La. (15)
Keeble, Charles B., 3102 S. Grand Blvd. (18)
Keely, Thomas J., Jr., 666 S. Florence Ave., Springfield
Keezer, William S., Gen. Delivery, Monroe City, Ind.
Keffler, Karl L., 1139 Bellevue Ave. (17)
Kehoe, John J., 4145 St. Louis Ave. (15)
Keim, John P., 2730 McNair Ave. (18)
Keller, Joseph M., 416 Metropolitan Bldg. (3)
Keller, Louis, 35 N. Central Ave. (5)
Keller, Maurice J., 3701 Grandel Sq. (8)
Keller, Niklaus J. A., Jr., Walter Reed Army Hospital, Washington 25, D. C.
Kellett, John G., 3611a Paris Ave. (15)
Kelley, Isaac D., Jr., 476 N. Kingshighway Blvd. (8)
Kelley, Robert W., 622 Beaumont Medical Bldg. (8)
Kelly, Charles A., 3606 Gravois Ave. (16)
Kelly, R. Emmet, 6335 Waterman Ave. (5)
Kenamore, Bruce, 457 N. Kingshighway Blvd. (8)
Kennedy, Francis L., 1001 Missouri Theatre Bldg. (3)
Kennedy, John L., 235 Beaumont Medical Bldg. (8)
Kerr, David N., 4500 Olive St. (8)
Kettelkamp, George D., 4931 Potomac St. (9)
Key, J. Albert, 4952 Maryland Ave. (8)
Keyes, E. Lawrence, 4952 Maryland Ave. (8)
Kieffer, Roland S., 402 Lister Bldg. (8)
Kienzle, Edward C., 2800a Chippewa St. (18)
Kilpatrick, Wm. R. J., 1515 Lafayette Ave. (4)
King, Francis C., 27 York Dr. (17)
King, John V., 689 E. Big Bend Blvd. (19)
King, Samuel J., 800 Carleton Bldg. (1)
Kinner, Helmuth M., 3014 S. Jefferson Ave. (18)
Kinsella, Dalton L., Jr., 4404 Lindell Blvd. (8)
Kinsella, Ralph A., 415 Beaumont Medical Bldg. (8)
Kirchner, Walter C. G., 7452 Wise Ave. (17)
Kirstein, Melvin B., 209 University Club Bldg. (3)
Kirtz, Louis P., 4952 Maryland Ave. (8)
Kistner, William F., 6683 Washington Ave. (5)
Kiyasu, Robert K., 2191 Pine St., San Francisco, Calif.
Klaff, Daniel D., 309 Beaumont Medical Bldg. (8)
Klein, Andrew G., 2959 Milton Blvd. (4)
Klein, Arnold G., 2632 S. Kingshighway Blvd. (9)
Klein, Arthur, P. O. Box 693, Perry Point, Md.
Klein, Bert H., 2632 S. Kingshighway Blvd. (9)
Klein, Harry A., 5074 N. Union Blvd. (15)
Kleinschmidt, Clinton, 827 Metropolitan Bldg. (3)
Klemme, Roland M., 4952 Maryland Ave. (8)
Klenk, Charles L., 420 Metropolitan Bldg. (3)
Klippel, Allen P., 5521 January Ave. (9)
Klippel, Bernhardt W., 3701 Grandel Sq. (8)
Klym, Nicholas, 1116 Salisbury Ave. (7)
Kneal, Ellsworth, 921 Missouri Theatre Bldg. (3)
Knese, Luke A., 1506 Hodiamont Ave. (12)
Knight, Franklin P., 2311 N. Kingshighway Blvd. (13)
Knight, William A., 8201 N. Broadway (15)
Knight, William A., Jr., 4161 Lindell Blvd. (8)
Knoke, Frederick William, Jr., 4535 Wabash
Knowlton, Norman P., Jr., 502 Beaumont Medical Bldg. (8)
Koenig, George H., 5135 31st Ave., S., St. Petersburg, Fla.
Koenig, Karl F., 502 Beaumont Medical Bldg. (8)
Kohler, Eugene J., 4968a Delmar Blvd. (8)
Kohler, Louis H., 5300 Arsenal St. (9)
Koon, Bernard T., 4755a Morganford Rd. (16)
Kopp, Leonard J., 7844 Madison Dr. (14)
Korn, Robert L., 504 Missouri Theatre Bldg. (3)
Kotkis, Alexander J., 80 York Dr. (17)
Kotner, Irvin A., Kaiser Fontana Hospital, Fontana, Calif.
Kotner, Lawrence M., 4409 West Pine Blvd. (8)
Kountz, William B., 415 Lister Bldg. (8)
Kouri, Martin F., 3705 Washington Ave. (8)
Koutsoumpas, William V., 1405 S. Broadway (4)
Kowert, Edward H., 208 Metropolitan Bldg. (3)
Kraft, Edward O., 9013 Moritz Ave. (17)
Kramer, Fred, 4161 Lindell Blvd. (8)
Kramolowsky, H. H., 986 Arcade Bldg. (1)
Krause, G. Lynn, 614 Beaumont Medical Bldg. (8)
Krebs, Joseph M., 910 Missouri Theatre Bldg. (3)
Krebs, Otto S., 207 Beaumont Medical Bldg. (8)
Kromer, Charles, 6606 Oleatha Ave. (9)
Kubitschek, Paul E., 207 Beaumont Medical Bldg. (8)
Kuebrich, Thomas C., 9a S. Florissant Rd. (21)
Kurth, Robert K., 16 Hampton Village Plaza (9)
Kurtzeborn, Edwin E., 4102 Inman Ave., Tampa, Fla.
Kurz, R. F., 1148 Pierce Bldg. (2)
Ladriere, Raymond J., 35 N. Central Ave. (5)
Lam, Robert Lee, 600 S. Kingshighway Blvd. (10)
Lammert, Thomas King, 14 Hillcrest, New Rochelle, N. Y.
Landree, James C., 437 University Club Bldg. (3)
Lane, Clinton W., 440 Beaumont Medical Bldg. (8)
Langan, William J., Jr., 5803 Plymouth Ave. (12)
Lange, Adolph C., 512 Wall Bldg. (8)
Lanier, Earl W., 307 S. Euclid Ave.
Lansche, Elmer A., 4885 Nat. Bridge Ave. (15)
Larimore, Joseph W., 626 Beaumont Medical Bldg. (8)
Larsen, Kenneth V., 819 University Club Bldg. (3)
Lassar, Gilbert N., 1307 Washington Ave. (3)
Lawrence, George H., 457 N. Kingshighway Blvd. (8)
Lawrence, John V., 4534 West Pine Blvd. (8)
Lawton, John T., 544th Gen. Dispensary, APO 20, c/o P.M., San Francisco, Calif.
Lawton, Lawrence W., 2801 N. Taylor Ave. (15)
Lawton, Thomas P., 2739 N. Grand Blvd. (6)
Le Blanc, Leo J., 708 Beaumont Medical Bldg. (8)
Lederman, Joseph, 2400a N. Grand Blvd. (6)
Lee, Elbert J., Jr., 220 N. 4th St. (2)
Lembeck, Joseph A., 601 University Club Bldg. (3)
Lenobel, Milton I., 504 Metropolitan Bldg. (3)

Lenzen, John L., Phillips Professional Bldg., Winter Haven, Fla.
Levin, Sidney S., 440 N. Taylor Ave. (8)
Levy, Irwin, 4952 Maryland Ave. (8)
Leydig, Stanley M., 16 Hampton Village Plaza (9)
Lieb, Otto V., 307 Lister Bldg. (8)
Liese, Grover B., 316 Beaumont Medical Bldg. (8)
Liggett, Hiram S., 401 Beaumont Medical Bldg. (8)
Lindeman, Carl H., 4126 Shreve Ave. (15)
Lipsitz, Ellis S., 457 N. Kingshighway Blvd. (8)
Lischer, Carl E., 457 N. Kingshighway Blvd. (8)
Littauer, David, 216 S. Kingshighway Blvd. (10)
Littmann, Lewis E., 8231 Clayton Rd. (17)
Litzow, Louis T., 1114 Missouri Theatre Bldg. (3)
Loeb, Virgil, 309 Beaumont Medical Bldg. (8)
Loeffel, Ellen S., 635 Beaumont Medical Bldg. (8)
Lohr, Curtis H., 601 S. Brentwood Blvd. (5)
Londe, Sol, 201 Lister Bldg. (8)
Lonergan, Warren M., 457 N. Kingshighway Blvd. (8)
Lonsway, Maurice J., 8225 Clayton Rd. (17)
Lopiccolo, Vincent J., 1931 Marconi Ave. (10)
Lottes, J. Otto, 16 Hampton Village Plaza (9)
Lowenstein, Paul S., 457 N. Kingshighway Blvd. (8)
Lucido, Joseph L., 1023 Missouri Theatre Bldg. (3)
Luedde, Philip S., 16 Hampton Village Plaza (9)
Lund, Herluf G., 2864 Lawndell Dr. (17)
Luten, Drew W., 502 Beaumont Medical Bldg. (8)
Lyman, Edward H., 906 Carleton Bldg. (1)
Lyman, Harry W., 906 Carleton Bldg. (1)
Lynxwiler, Chester P., 1325 S. Grand Blvd. (4)
Lyttle, Garnet C., 2407a N. Broadway (6)
Lytton, William B., 29 Overhill Dr. (17)
McAdam, C. Rush, 525 Frisco Bldg. (1)
McAfee, C. Alan, 457 N. Kingshighway Blvd. (8)
McBratney, Emmett W., 1812 S. Elm St., Tucson, Ariz.
McCarroll, Henry R., 614 Beaumont Medical Bldg. (8)
McCarthy, Eugene F., 5070 Westminster Pl. (8)
McDonald, George H., 5795 Pershing Ave. (12)
McDonald, John J., Scott Field, Belleville, Ill.
McDowell, Frank S., 400 Metropolitan Bldg. (3)
McElvain, Robert C., 4356 Warne Ave. (7)
McFadden, James F., 940 Missouri Theatre Bldg. (3)
McFadden, James F., Jr., 940 Missouri Theatre Bldg. (3)
McFarlane, John A., 635 Buchanan St., Topeka, Kansas
McGahan, John J., Address Unknown
McGennis, Patrick, P. O. Box 603 (1)
McGinnis, Byron J., 16 Hampton Village Plaza (9)
McGinnis, William F., 716 Beaumont Medical Bldg. (8)
McGuire, William A., 2322 N. Kingshighway Blvd. (13)
McLelland, Richard I., 4385 Maryland Ave. (8)
McMahon, Alphonse, 806 Missouri Theatre Bldg. (3)
McMahon, Bernard J., 806 Missouri Theatre Bldg. (3)
McNamara, John J., 10300 St. Charles Rock Rd. (14)
McNamee, Owen J., 7619 Ivory Ave. (11)
McNamee, William F., 7619a Ivory Ave. (11)
McNeel, John O., 1127 Pine St. (1)
McSwiney, John G., 5014 Thekla Ave. (15)
Maas, Hermann, 827 Metropolitan Bldg. (3)
Macbryde, Cyril M., 429 Missouri Theatre Bldg. (3)
Mack, Robert E., 1325 S. Grand Ave. (4)
Mackey, John F., Jr., 994 Arcade Bldg. (1)
Macko, Joseph R., 1303 N. Kingshighway Blvd. (13)
Macnish, James M., 4405 West Pine Blvd. (8)
Macon, William L., Jr., 7158 Manchester Ave. (17)
Magallon, Dorothy T., 5920 Wise Ave. (10)
Magee, Charles D., 925 Arcade Bldg. (1)
Maizus, S. H., 405 S. Side Nat. Bank Bldg. (16)
Malles, A. Conrad, 819 University Club Bldg. (3)
Manion, Peter J., 3915 Brannon Ave. (9)
Mannis, Ben G., 846 N. McKnight Rd. (24)
Mansbacher, Kurt, 462 N. Taylor Ave. (8)
Manting, George, 211 Roosevelt Hotel Bldg. (8)
Marston, Warren G., 325 University Club Bldg. (3)
Martin, Charles E., 4020 W. Florissant Ave. (7)
Martin, Maynard W., 5535 Delmar Blvd. (12)
Martin, Raymond T., 5203 Chippewa St. (9)
Martin, Thomas M., 937 Missouri Theatre Bldg. (3)
Mason, Roy E., 410 Frisco Bldg. (1)
Massie, Edward, 457 N. Kingshighway Blvd. (8)
Masters, William H., 630 S. Kingshighway Blvd. (10)
Mastin, E. Vernon, 930 Beaumont Medical Bldg. (8)
Mathae, George H., 3167 S. Grand Blvd. (18)
Matthews, John G., 3707 Watson Rd. (9)
Mattis, Robert D., 1119 Missouri Theatre Bldg. (3)
Maughs, Sydney B., 4500 West Pine Blvd. (8)
Max, C. O. C., 701 Beaumont Medical Bldg. (8)
Max, Paul F., 701 Beaumont Medical Bldg. (8)
Maxwell, Richard W., 8126 Teasdale Ave. (24)
Medler, Francis J., 4114 W. Florissant Ave. (15)
Mehan, George T., 417 Wall Bldg. (8)
Meinberg, William H., Jr., 320 Frisco Bldg. (1)
Meiners, Edwin P., 6651 Enright Ave. (5)
Meiners, Theodore M., 922 Newport Ave. (19)
Meisenbach, A. Edward, 3903 Olive St. (8)
Melick, William F., 306 Humboldt Bldg. (3)
Mellies, Eugene G., 7503 Florissant Rd. (21)
Mellies, George A., 2917 St. Louis Ave. (6)
Mendonsa, Lawrence E., 837 University Club Bldg. (3)
Merenda, Sam J., 1695 Brentwood Blvd. (17)
Merklin, Anton L., 3507 Potomac St. (18)
Merz, Jean J., 6005 Bishops Pl. (9)
Metz, Charles O., 3102a S. Grand Blvd. (18)
Meyer, Curtis A., 6534 Walsh Ave. (9)
Meyer, Herman M., 4409 West Pine Blvd. (8)
Meyer, James E., Ballwin
Meyer, Oscar D., 6029 S. Kingshighway Blvd. (9)
Meyerhardt, Milton H., 4409 West Pine Blvd. (8)
Meyers, Montague M., Address Unknown
Mezera, Raymond A., 201 Humboldt Bldg. (3)
Michael, Vernon E., 957 Arcade Bldg. (1)
Michaelree, John F., 2816 Sutton Ave. (17)
Middleman, Isadore C., 462 N. Taylor Ave. (8)
Mier, Thomas M., 703 University Club Bldg. (3)
Milder, Benjamin, 501 Humboldt Bldg. (3)
Miller, Charles W., 408 Humboldt Bldg. (3)
Miller, Dan Tucker, 1001 Paul Brown Bldg. (1)
Miller, H. Edward, 29 North Ct. (8)
Miller, Perry B., Harbor Hospital, Detroit, Mich.
Millikin, L. A., 2608 S. Kingshighway Blvd. (9)
Mills, Warren B., 1420 Grattan St. (4)
Milster, Clyde R., 409 Frisco Bldg. (1)
Mistachkin, Norman L., 3903 Olive St. (8)
Mitchell, Roy Earl, Salem, Mo.
Moeller, Carl E., 3537 S. Jefferson Ave. (18)
Molholm, Hans B., 4500 West Pine Blvd. (8)
Montani, Charles, 5147 Daggett Ave. (10)
Moore, Neil S., 7299 Westmoreland Dr. (5)
Moore, Robert A., 602 S. Euclid Ave. (10)
Moore, Sherwood, 600 S. Kingshighway Blvd. (10)
Moore, Walter L., 6 Clayton Ter. (24)
Moore, William A., 925a Goodfellow Blvd. (12)
Morfit, John C., 7112 Wydown Ave. (5)
Morrin, Kevin, C., 5251 Westminster Pl. (8)
Morris, Harvey E., 4110 W. Florissant Ave. (7)
Morris, Mary E., 719 Metropolitan Bldg. (3)
Moskop, Peter G., 3736 Dunnica Ave. (16)
Motzel, Albert J., 6238 Washington Ave. (5)
Mountjoy, Grace Scholz, 4439 Floriss Pl. (15)
Mowrey, William O., 3633 Fair Ave. (15)
Moyer, Carl A., 600 S. Kingshighway Blvd. (10)
Muckerman, Richard I. C., 439 Missouri Theatre Bldg. (3)
Mudd, J. Gerard, 35 Godwin Lane (17)
Mudd, James L., 914 Missouri Theatre Bldg. (3)
Mueller, Charles B., 600 S. Kingshighway Blvd. (10)
Mueller, Clarence E., 1020 Missouri Theatre Bldg. (3)
Mueller, Joseph A., 2924 S. Grand Blvd. (18)
Mueller, Morris A., 24 Deerfield Rd. (17)
Mueller, Robert, 974 Arcade Bldg. (1)
Mueller, Robert J., 16 Hampton Village Plaza (9)
Mueller, W. K., 601 University Club Bldg. (3)
Muenster, Joseph J., Jr., 74th Medical Gp. Depot, A.P.O. 970, San Francisco, Calif.
Muether, Raymond O., 4161 Lindell Blvd. (8)
Mulligan, Leo V., 916 Missouri Theatre Bldg. (3)
Munsch, Augustus P., 306 Humboldt Bldg. (3)
Munsch, Girard A., 33 N. Meramec Ave. (5)
Murphy, James P., 934 University Club Bldg. (3)
Murphy, John C., 228 Beaumont Medical Bldg. (8)
Murphy, John P., 308 Lister Bldg. (8)
Murphy, Paul, 3842 Flora Pl. (10)
Murray, Louis F., 605 Russell Blvd. (4)
Mutshnick, Clara P., 3103 Shenandoah Ave. (4)
Myers, E. Lee, 208 Wall Bldg. (8)
Naryka, Joseph J., 306 Humboldt Bldg. (3)
Nash, Helen E., 1048a N. Vandeventer Ave. (13)
Neilson, Arthur W., 306 Humboldt Bldg. (3)
Neilson, Charles H., 6319 Alexander Dr. (5)
Nelson, William, 5449 Delmar Blvd. (12)
Nemec, Stanley S., 205 Wall Bldg. (8)
Nester, Charles A., 5600 S. Compton Ave. (11)
Nester, Gerard A., 5600 S. Compton Ave. (11)
Neumann, Roland F., Jr., 418 Beaumont Medical Bldg. (8)
Neun, W. F., 5862 Delor St. (9)
Newman, Harold G., 5 Lindworth Lane (17)
Newman, Percy, 3539 Hartford St. (18)
Nicholson, Clarence M., Pennsylvania Hotel, St. Petersburg, Fla.
Nicolai, Charles H., Rt. 1. Box 626 (24)
Niesen, Frank Joseph, 5015a Oleatha Ave. (9)
Noah, Joseph W., 625 University Club Bldg. (3)
Nofles, James W., 4108a Easton Ave.
Nolan, Charles J., 736 University Club Bldg. (3)
Noller, Henry W., 540 Beaumont Medical Bldg. (8)

Northup, Glenn R., 740 S. 4th St. (2)
Norton, William Hudson, 729 Missouri Theatre Bldg. (3)
Nuetzel, John A., 9564 Parklane (17)
Nye, Robert S., 3201 Arsenal St. (18)
Obermeyer, Charles G., 3103 Arsenal St. (18)
O'Brien, Edward C., Vets. Adm. Center, Shreveport, La.
O'Brien, Robert M., 4161 Lindell Blvd. (8)
Odell, Richard T., 600 S. Kingshighway Blvd. (10)
O'Dowd, James A., 2919 S. Kingshighway Blvd. (9)
Ogura, Joseph H., 9080 W. Swan Circle (17)
Ohmoto, Masao, 317 University Club Bldg. (3)
O'Keefe, Charles D., 718 Beaumont Medical Bldg. (8)
O'Leary, James L., 660 S. Kingshighway Blvd. (10)
Olmsted, William H., 1011 Beaumont Medical Bldg. (8)
O'Malley, Eugene J., 614 Missouri Theatre Bldg. (3)
O'Neill, John B., 1222 Missouri Theatre Bldg. (3)
Oppenheimer, Henry E., 327 Metropolitan Bldg. (3)
O'Reilly, Daniel E., 4161 Lindell Blvd. (8)
Orenstein, Joseph M., 108 Lister Bldg. (8)
Orgel, M. Norman, 626 Metropolitan Bldg. (3)
Orrahood, M. David, 1402 S. Grand Blvd. (4)
O'Sullivan, George A., 421 Schirmer St. (11)
Owen, James W., Jr., 625 University Club Bldg. (3)
Paine, Robert, 901 Beaumont Medical Bldg. (8)
Palazzo, Frank A., 4161 Lindell Blvd. (8)
Paletta, Francis X., 940 Missouri Theatre Bldg. (3)
Pampush, James J., Address Unknown
Parashak, Paul M., 5203 Chippewa St. (9)
Parato, John M., 4224a N. Grand Blvd. (7)
Pareira, Morton D., 743 Yale Ave. (5)
Parker, Thomas W., 605 Clara Ave. (12)
Parker, William, 807 Carleton Bldg. (1)
Parsons, Ernest H., 457 N. Kingshighway Blvd. (8)
Passanante, Bartholomew M., 306 Humboldt Bldg. (3)
Patton, John F., Fitzsimmons Army Hospital, Denver, Colo.
Patton, Leslie E., 701 Beaumont Medical Bldg. (8)
Payne, Meredith J., 1515 Lafayette Ave. (4)
Payne, Richard J., 718 University Club Bldg. (3)
Peden, Burnet W., 35 N. Central Ave. (5)
Peden, Joseph C., 1015 Missouri Theatre Bldg. (3)
Peden, Joseph C., Jr., 457 N. Kingshighway Blvd. (8)
Peeler, James O., 2505 N. Florissant Ave. (6)
Pelz, Mort D., 304 University Club Bldg. (3)
Penney, David L., 316 Wall Bldg. (8)
Pennington, F. Eugene, 27 Log Cabin Dr. (17)
Pennoyer, James, 457 N. Kingshighway Blvd. (8)
Pernoud, F. G., Jr., 841 Audubon Dr. (5)
Pernoud, Michael F., 51 Frontenac (24)
Peters, Augustus W., 4145a S. Grand Blvd. (18)
Peugnet, Hubert B., 512 Beaumont Medical Bldg. (8)
Pfeifer, Oliver C., 4523 S. Kingshighway Blvd. (9)
Pfeiffenberger, Mather, Jr., 463 Bluff St., Alton, Ill.
Phelan, Emma, Rte. No. 2, Kimmswick, Mo.
Pickrell, Claude D., 406 Frisco Bldg. (1)
Piekarski, Anthony A., 1525a Cass Ave. (6)
Pieper, Henry G., 3456 Gravois Ave. (18)
Pitzman, Marsh, 6 Kingsbury Pl. (12)
Plag, Albert F., 3150 Morganford Rd. (16)
Platt, William R., 919 N. Taylor Ave. (8)
Plesons, John D., 3632 Bates St. (16)
Ploehn, Emma, 2728 Geyer Ave. (4)
Plumpe, W. Tupper, 3933 S. Grand Blvd. (18)
Pollock, Ellis L., 3958 Arsenal St. (16)
Pollock, Max, 311 Metropolitan Bldg. (3)
Popovich, Paul J., 6102 Oakland Ave. (10)
Portuondo, Bonaventura C., 3532 Flora Ct. (4)
Post, Lawrence T., 524 Metropolitan Bldg. (3)
Post, M. Hayward, 524 Metropolitan Bldg. (3)
Potashnick, Robert, 824 Metropolitan Bldg. (3)
Pote, Thomas B., 4925 Parkview Pl. (10)
Potter, Allen B., 5203 Chippewa St. (9)
Powell, Carl A., 819 W. High St., Jefferson City, Mo.
Powell, Earl A., 729 Frisco Bldg. (1)
Powell, Rudolph V., 512 Beaumont Medical Bldg. (8)
Powers, Pierce W., 1106 Missouri Theatre Bldg. (3)
Pranger, Sylvester H., 4952 Maryland Ave. (8)
Presnell, Cleitus A., 630 Missouri Theatre Bldg. (3)
Press, Maurice J., 7508 York Dr. (5)
Probstein, Jacob G., 108 Lister Bldg. (8)
Proetz, Arthur W., 1002 Beaumont Medical Bldg. (8)
Pruett, Burchard S., 6006 Virginia Ave. (11)
Pruett, Hubert S., 2739 N. Grand Blvd. (6)
Puckett, Cordelia, 69 Crestwood Dr. (5)
Pulliam, M. J., 618 University Club Bldg. (3)
Purcell, Harry K., 4660 Maryland Ave. (8)
Pyne, Herbert S., 2752a Cherokee St. (18)
Quinn, Abram T., 6917 Fyler Ave. (9)
Quirin, Warren S., 2621 S. Jefferson Ave. (18)
Raemdonck, Alphonse J., 4390 West Pine Blvd. (8)
Ramos, Raoul L., 3224 January Ave. (9)
Rapp, Harold B., 1339 McCutcheon Ave. (17)
Ray, Richard H., 1010 McCausland Ave. (17)
Ready, James H., RR No. 2, Shackleford Rd., Florissant
Regan, William W., Officer's Mail Section, Station Hosp., Sheppard A.F.B., Texas
Reh, Edward P., 462 N. Taylor Ave. (8)
Reich, Harry A., 6230 Devonshire Ave. (9)
Reichert, M. Cecelia, 5209 Nottingham Ave. (9)
Reiches, Aaron J., 115 Lister Bldg. (8)
Reid, William F., 2601 Whittier St.
Reilly, Leo J., 730 Hodiamont Ave. (12)
Reis, Carl J., 18 S. Kingshighway Blvd. (8)
Rendleman, George F., 957 Arcade Bldg. (1)
Repetto, Albert M., 405 University Club Bldg. (3)
Resnikoff, Lewis E., 3612 S. Jefferson Ave. (18)
Reuter, Louis A., 2625a N. 9th St. (6)
Reynolds, Fred, 4952 Maryland Ave. (8)
Rice, Earl R., 611 Olive St. (1)
Richman, Elmer, 1034 Missouri Theatre Bldg. (3)
Ries, Douglas A., 635 Misouri Theatre Bldg. (3)
Riggio, Salvatore N., 2612 S. Kingshighway Blvd. (9)
Riley, Ralph D., 1134 Missouri Theatre Bldg. (3)
Riley, Ralph W., 1515 Lafayette Ave. (4)
Riley, William H., 4660 Maryland Ave. (8)
Ringo, Henry J., 833 Missouri Theatre Bldg. (3)
Riordan, Lawrence M., 320 Lister Bldg. (8)
Ritchey, Mary G., 5855 Wabada Ave. (12)
Ritchie, Frances R., 5233 Waterman Ave. (8)
Ritter, Hubert A., 1325 S. Grand Blvd. (4)
Roberts, Harold K., 1011 Beaumont Medical Bldg. (8)
Robertson, Frank G., 833 Missouri Theatre Bldg. (3)
Robertson, Leroy L., 340 Beaumont Medical Bldg. (8)
Roche, Maurice B., 226 Beaumont Medical Bldg. (8)
Roe, Allen N., 2274 Yale Ave. (17)
Rohlfing, Walter A., 4724 Gravois Ave. (16)
Romendick, Samuel S., 5366 Maple Ave. (12)
Rose, Dalton Keats, 316 Beaumont Medical Bldg. (8)
Rosen, Charles S., 412 Humboldt Bldg. (3)
Rosenbaum, Harry D., 840 Beaumont Medical Bldg. (8)
Rosenberg, Meyer B., 5689 Pernod Ave. (9)
Rosenfeld, Henry, 618 Wall Bldg. (8)
Rosenfeld, Herman J., 621 Wall Bldg. (8)
Rosenthal, Leonard G., Box 52, Main P. O. (3)
Ross, Charles M., 3720 Washington (8)
Roth, John J., 1020 Missouri Theatre Bldg. (3)
Rothman, David, 462 N. Taylor Ave. (8)
Rothman, Paul M., 3103 Shenandoah Ave. (4)
Rotter, Julius C., 2603 Cherokee St. (18)
Roulhac, George E., 530 Beaumont Medical Bldg. (8)
Royce, Robert K., 316 Beaumont Medical Bldg. (8)
Royston, G. D., Rte. 3, Hope, Ark.
Ruddell, George W., 1259 N. Kingshighway Blvd. (13)
Rudi, Herbert J., 3532 Gravois Ave. (18)
Ruhling, Rudy, 5203 Chippewa St. (9)
Rund, Emmet H., 5417 S. Grand Blvd. (11)
Ryan, Linus M., 515 Wall Bldg. (8)
Ryan, Robert E., 540 Beaumont Medical Bldg. (8)
Sachar, Leo A., 457 N. Kingshighway Blvd. (8)
St. John, Dewey, 833 Metropolitan Bldg. (3)
St. John, Thomas C., 832 Metropolitan Bldg. (3)
Sale, Llewellyn, 108 Lister Bldg. (8)
Sale, Llewellyn, Jr., 108 Lister Bldg. (8)
Sanders, Robert D., 1502 Cass Ave. (6)
Sanders, Theodore E., 840 Beaumont Medical Bldg. (8)
Sanford, Joseph Hoy, 401 Beaumont Medical Bldg. (8)
Sante, L. R., 606 Missouri Theatre Bldg. (3)
Sargent, Frederick K., 6430 Hampton Ave. (9)
Saslow, George, 325 Westgate Ave. (5)
Sassin, Edmond F., 324 Frisco Bldg. (1)
Sato, George, 2500 Medical Group, Mitchel A.F.B., New York
Satterfield, Val B., 415 Lister Bldg. (8)
Sauer, F. J. Dean, 106 S. Central Ave. (5)
Sauer, W. Nicholas, 218 Beaumont Medical Bldg. (8)
Sauer, William E., 218 Beaumont Medical Bldg. (8)
Sausville, Albert J., 8321 N. Broadway (15)
Saxton, John A., Jr., 1430 Carroll St. (4)
Schaaf, Katherine M., Address Unknown
Schaper, Ernest H., 907 Wrenwood Ave. (17)
Schechter, Samuel E., 537 Missouri Theatre Bldg. (3)
Scheer, George E., 204 Humboldt Bldg. (3)
Scheff, Harold, 457 N. Kingshighway Blvd. (8)
Scherman, Victor E., 830 Beaumont Medical Bldg. (8)
Schiele, Herbert S., Jr., 6023 Waterman Ave. (12)
Schlenker, John L., 5400 Arsenal St. (9)
Schlenker, Lawrence, 3515 S. Grand Blvd. (18)
Schlossstein, Adolph G., 3438 Russell Blvd. (4)
(4)
Schlueter, Newell W., 204 Pasteur Bldg. (8)
Schlueter, Robert E., 3839 Lindell Blvd. (8)
Schmidt, Edwin H., 9244 Coral Dr. (23)
Schmiemeier, Herman A., 6811a Gravois Ave. (16)
Schmiemeier, Roy H., 6422 S. Kingshighway Blvd. (9)
Schmitz, Edgar F., 219 Harrison Ave. (21)
Schnoebelen, Paul C., 101 Pasteur Bldg. (8)
Scholz, Roy P., 620 Metropolitan Bldg. (3)
Schrepel, Herbert O., 614 Missouri Theatre Bldg. (3)
Schuchat, W. Louis, 3866 Flora Pl. (10)
Schuck, Philip, 1703 S. Grand Blvd. (4)

Schumacher, Cyril W., 4991 Thrush Ave. (20)
Schwartz, Frederick O., 727 Metropolitan Bldg. (3)
Schwartz, Henry G., 600 S. Kingshighway Blvd. (10)
Schweiss, John F., 2nd Marine Division, Camp LeJeane, Jackson, No. Carolina
Sciortino, Gaspare, 5501a St. Louis Ave. (20)
Sciortino, John S., 301 Beaumont Medical Bldg. (8)
Scopelite, Joseph A., 3718 N. Grand Blvd. (7)
Scott, Elwin P., 3258 Lafayette Ave. (4)
Scott, Wendell G., 35 N. Central Ave. (5)
Seabold, John A., 1006 Carleton Bldg. (1)
Seaman, William B., 510 S. Kingshighway Blvd. (10)
Seddon, John W., 4500 West Pine Blvd. (8)
Seib, George A., 2323 Lafayette Ave. (4)
Senseney, Eugene T., 201 Pasteur Bldg. (8)
Senturia, B. H., 500 N. Skinker Blvd. (5)
Senturia, Hyman R., 462 N. Taylor Ave. (8)
Sertl, John D., 2804a California Ave. (18)
Sevin, Omar R., 4952 Maryland Ave. (8)
Sewing, Arthur H., 2342 St. Louis Ave. (6)
Sexton, Daniel L., 937 University Club Bldg. (3)
Sexton, Elmer E., 909 Arcade Bldg. (1)
Shackelford, H. H., 504 Wall Bldg. (8)
Shahan, Philip T., 524 Metropolitan Bldg. (3)
Shahan, William E., 524 Metropolitan Bldg. (3)
Shaner, John F., 912 Beaumont Medical Bldg. (8)
Shanklin, Benjamin, 1514 S. Jefferson Ave. (4)
Shapleigh, John B., 7030 Maryland Ave. (5)
Sheedy, John A., 301 Logan Blvd., Altoona, Pa.
Sheets, John S., 2500 S. Kingshighway Blvd. (10)
Sheets, Martin E., 4329 Manchester Ave. (10)
Shelton, Harold J., 16 Hampton Village Plaza (9)
Sherard, Julius C., 2702a Franklin Ave. (6)
Sheridan, Edmund R., 16 Hampton Village Plaza (9)
Sherman, Alfred I., 630 S. Kingshighway Blvd. (10)
Sherwin, Charles S., 801 Beaumont Medical Bldg. (8)
Shoulders, Harrison H., Jr., 5843 Cabanne Ave. (12)
Shrader, E. Lee, 415 Beaumont Medical Bldg. (8)
Shreffler, A. R., Box 138, Tavernier, Fla.
Shutt, Cleveland H., 220 N. 4th St. (2)
Shy, James C., 4047a Gravois Ave. (16)
Siddall, H. Stewart, 41 E. Main St., New London, Ohio
Siebert, Walter J., 3 Oakleigh Lane (5)
Siesener, Herbert H., 408 Humboldt Bldg. (3)
Sievers, Edward F., 635 Midland Ave. (5)
Signorelli, Andrew J., 2801 N. Taylor Ave. (15)
Silvermintz, Saul D., 626 Metropolitan Bldg. (3)
Simon, David Leo, 5535a Cabanne Ave. (12)
Simon, Jerome I., 830 Beaumont Medical Bldg. (8)
Simon, Selig, 4475 West Pine Blvd. (8)
Simpson, Eber, 3739 Gravois Ave. (16)
Simpson, Guy, 1205 Missouri Theatre Bldg. (3)
Sinkler, William H., 4503a Page Blvd. (13)
Sinner, Bernard L., 16 Hampton Village Plaza (9)
Sisk, James C., 110 S. Central Ave., Clayton (5)
Sisson, Richard G., 216 S. Kingshighway Blvd. (10)
Skeffington, Mary Jane, 3615 Olive St. (8)
Smiley, William, 4105a Easton Ave. (13)
Smit, William M., 3908 Olive St. (8)
Smith, B. F., Jr., 340 Beaumont Medical Bldg. (8)
Smith, Frank John, 4930 Lindell Blvd. (8)
Smith, Garland F., 418 Beaumont Medical Bldg. (8)
Smith, Herbert P., 5205a Chippewa St. (9)
Smith, Hugh R., 430 University Club Bldg. (3)
Smith, J. Earl, 4450 Westminster Pl. (8)
Smith, Kathleen, 640 S. Kingshighway Blvd. (10)
Smith, Milton, 830 Beaumont Medical Bldg. (8)
Smith, Robert M., 114 N. Taylor Ave. (8)
Smolik, Edmund A., 422 Beaumont Medical Bldg. (8)
Snyder, Edward N., 705 Olive St. (1)
Soper, Horace W., 521 Missouri Theatre Bldg. (3)
Soule, Samuel D., 108 Lister Bldg. (8)
Spain, Kate C., 5321 Savoy Ct. (12)
Spaulding, Robert W., 919 S. 24th St., Fort Smith, Ark.
Spencer, Selden, 718 University Club Bldg. (3)
Spinzig, Edgar W., 5 Hawbrook Lane (22)
Spivy, Raymond M., 502 Beaumont Medical Bldg. (8)
Spoeneman, Walter H., 1515 St. Louis Ave. (6)
Stahl, P. D., 301 Pasteur Bldg. (8)
Stanton, Mearl F., 1402 S. Grand Blvd. (8)
Stanze, Frank J., 3924 S. Grand Blvd. (18)
Staple, Daniel E., 418 E. 11th St., Rolla
Starkloff, Gene B., 929 University Club Bldg. (3)
Starkloff, Max, 512 Dover Pl. (11)
Stearns, Colby S., 7th Hospital Gp., Feamcom A.B. A.P.O. 323-2, San Francisco, Calif.
Stecher, John F., 1515 Lafayette Ave. (4)
Steckler, George, 617 Missouri Theatre Bldg. (3)
Stein, Arthur W., 3606 Gravois Ave. (16)
Steinberg, Franz U., 462 N. Taylor Ave. (8)
Steiner, Albert S., 308 N. Sixth St. (1)
Stephens, LeRoy J., 218 Sylvester Ave. (19)
Stephens, Louis F., 4979a Chippewa St. (9)
Stephenson, Hugh E., Jr., 303 E. 20th St., New York, N. Y. (3)
Stevens, Robert W. 1222 Missouri Theatre Bldg. (3)
Stevenson, Alan J., MacDill A.F.B. Hospital, Tampa, Fla.
Stewart, Floyd, 1507 Chemical Bldg. (1)
Stewart, John W., 4660 Maryland Ave. (8)
Stindel, Charles E., 341 Violet Lane (19)
Stock, Albert Edward, 235 Papin Ave. (19)
Stolar, Jacob, 603 Metropolitan Bldg. (3)
Stone, Charles A., 912 Beaumont Medical Bldg. (8)
Stone, Edna M., 4916 Odell Ave. (9)
Strauss, Arthur E., 601 Humboldt Bldg. (3)
Striegel, B. F., 1875 Madison St. (6)
Strub, Giles J., HQRs CTAF, Randolph A.F.B., Texas
Stryker, Garold V., 1144 Missouri Theatre Bldg. (3)
Stude, William Carl, 16 Hampton Village Plaza (9)
Stutsman, Albert C., 640 Beaumont Medical Bldg. (8)
Styblo, Clarence J., Veterans Administration Hospital (23)
Sudholt, Alfred F., Jr., 457 N. Kingshighway Blvd. (8)
Sullivan, Clement J., 4161 Lindell Blvd. (8)
Summers, John B., 6105 Pershing Ave. (12)
Sunderman, Raymond C., 4943 Natural Bridge Ave. (15)
Susanka, William Dee, 10061 Lakeside Dr. (23)
Sweet, Herbert C., 5616 Maxwell Ave. (23)
Swekosky, Frank J., 2528 S. Jefferson Ave. (4)
Talbott, Hudson, 427 Metropolitan Bldg. (3)
Tanaka, George M., 64th Field Hospital, San Francisco, Calif.
Tapper, Stephen M., 1010 Paul Brown Bldg. (1)
Tate, Lloyd L., 901 Washington Ave. (1)
Taussig, Barrett L., 316 Lister Bldg. (8)
Tess, Melvin H., 4118a West Florissant Ave. (15)
Thale, Thomas, 227 Hampton Village Plaza (9)
Thoma, George E., Jr., Hd. Sqn. Sch. of Aviation Med., Randolph A.F.B., Texas
Thomas, Charles S., 644 Frisco Bldg. (1)
Thompson, Arthur M., 1242 Missouri Theatre Bldg. (3)
Thompson, J. William, 4952 Maryland Ave. (8)
Thompson, Lawrence D., 542 Missouri Theatre Bldg. (3)
Thompson, Ralph L., 601 University Club Bldg. (3)
Thym, Henry P., 514 Metropolitan Bldg. (3)
Tichenor, Robert W., Sappington, Mo.
Tindall, Robert N., 16 Hampton Village Plaza (9)
Titterington, Paul F., 211 Metropolitan Bldg. (3)
Tjoflat, Oliver E., 4224 N. Grand Blvd. (7)
Tobias, Norman, 700 S. Meramec Ave. (5)
Todd, D. Clay, 4140 Forest Park Blvd. (8)
Tomlinson, William Loren, 316 Camelia Ave. (19)
Tonelli, George L., 513 Wall Bldg. (8)
Tooker, Charles W., 1005 Carleton Bldg. (1)
Torin, Bernice A., 814 Metropolitan Bldg. (3)
Tremain, I. G., 4254 Flora Blvd. (10)
Trigg, Joseph F., 233 Metropolitan Bldg. (3)
Tripodi, Anthony M., 506 N. 2nd St., Tacoma, Wash.
Trobaugh, Frank E., Jr., 4952 Maryland Ave. (8)
Trotter, Francis O., Jr., 1015 Missouri Theatre Bldg. (3)
Turner, Rush, 1251 Blackstone Ave. (12)
Twedell, Donald L., 4143a N. Newstead Ave. (15)
Tyzzer, Robert N., 6091 Bellevue Ave., La Jolla, Calif.
Uhlemeyer, Henry A., 4362 Warne Ave. (7)
Uhlemeyer, Henry A., Jr., 73 Bellerive Acres (21)
Unterberg, Hillel, 325 Frisco Bldg. (1)
Vandover, John T., 3503 Crittenden St. (18)
Van Matre, R. M., 415 Pine St. (1)
Van Vranken, Eugene E., TAC Office of Air Surgeon, Langley A.F.B., Va.
Vatterott, Paul B., 10300 St. Charles Rock Rd. (14)
Vaughan, J. Russell, 1122 Missouri Theatre Bldg. (3)
Vaughn, A. N., 11 N. Jefferson Ave. (3)
Venable, Howard P., 11 N. Jefferson Ave. (3)
Verda, Dominic J., 400 Lister Bldg. (8)
Vermillion, Crofford O., 600 S. Kingshighway Blvd. (10)
Vezeau, Stephen, 1504 S. Grand Blvd. (4)
Virant, John A., 2 Picardy Lane (5)
Vitt, Alvin E., 4161 Lindell Blvd. (8)
Vitt, Edwin F., 16 Hampton Village Plaza (9)
Viviano, Joseph G., 16 Hampton Village Plaza (9)
Vivona, Stefano, Hdqrs. V Corps Surgeons Section, New York, N. Y.
Vogel, Eugene A., 3325 S. Grand Blvd. (18)
Vogt, William H., Jr., 330 Metropolitan Bldg. (3)
Vohs, Carl F., 610 Metropolitan Bldg. (3)
Von Kaenel, Joseph E., 551 Barnes Rd. (5)
Vournas, Christopher G., 201 Humboldt Bldg. (3)
Wade, James P., 1004 Missouri Theatre Bldg. (3)
Wagenbach, William F., 4717 Morganford Rd. (16)
Waickman, Francis J., 6901 Plymouth Ave. (14)
Walker, Willard B., Barnes Hospital (10)
Wall, Emmett D., 5823 Neosho Ave. (9)
Wallace, Edgar S., 718 University Club Bldg. (3)
Wallace, M. Marvin, U. S. Public Health Service Hospital, Windmill Point, Detroit, Mich.
Walsh, Theodore E., 640 S. Kingshighway Blvd. (10)
Walters, Harold E., 720 Metropolitan Bldg. (3)
Walters, John H., 4105 Magnolia Ave. (10)
Walters, Laura, 4105 Magnolia Ave. (10)

Walters, William H., 3608 S. Grand Blvd. (18)
Walton, Franklin E., 602 S. Euclid Ave. (10)
Warner, George K., 8205 W. 16th St., Lakewood, Colo.
Warner, Robert G., 1115 Paul Brown Bldg. (1)
Wasserman, Helman C., 108 Lister Bldg. (8)
Wattenberg, Carl A., 49 Kingsbury Pl. (12)
Wayland, Thomas A., 3201a S. Grand Blvd. (18)
Weaver, Richard H., 40 N. Florissant Rd. (21)
Webb, Lewis M., 4501a Manchester Ave. (10)
Webb, Marion A., 221 Lister Bldg. (8)
Webb, Paul B., 1915a Sidney St. (4)
Webb, Paul K., 1508 Chemical Bldg. (1)
Weber, Eugene P., 601 Beaumont Medical Bldg. (8)
Wegner, Carl R., 630 S. Kingshighway Blvd. (10)
Weiler, Thomas J., 504 Missouri Theatre Bldg. (3)
Weinel, Francis G., 5205 Chippewa St. (9)
Weinhaus, Robert S., 507 Metropolitan Bldg. (3)
Weinsberg, William C., 3606 Gravois Ave. (16)
Weintraub, Solomon A., 208 Lister Bldg. (8)
Weir, Don C., 606 Missouri Theatre Bldg. (3)
Weir, Royal A., 462 N. Taylor Ave. (8)
Weis, Matthew W., 437 Missouri Theatre Bldg. (3)
Weiss, Richard S., 940 Beaumont Medical Bldg. (8)
Welborn, William S., Vets. Adm. Hosp., Amarillo, Texas
Welch, Hooper W., 630 Missouri Theatre Bldg. (3)
Welsh, Laurence C., 4030 Chouteau
Wennerman, Sam F., 1045 Missouri Theatre Bldg. (3)
Wentzel, Louis R., 2726 Chouteau Ave. (3)
Wenzel, Peter S., 310 Pasteur Bldg. (8)
Werner, August A., 404 Humboldt Bldg. (3)
Werner, William A., 16 Hampton Village Plaza (9)
Westerman, Henry C., 7160 Princeton Ave. (5)
Westlake, Samuel B., 309 Beaumont Medical Bldg. (8)
Westphaelinger, Henry F., 1901 Alfred Ave. (10)
Weyerich, Leon F., 8321 N. Broadway (15)
White, Charles A., 319 Metropolitan Bldg. (3)
White, Orville O., 1194 Hodiamont Ave. (12)
White, Park J., 337 N. Euclid Ave. (8)
White, Robert E., Lackland A.F.B. Hospital, San Antonio, Texas
White, T. Wistar, 220 Lister Bldg. (8)
White, W. H., 110 S. Central Ave. (5)
White, W. H., Jr., 110 S. Central Ave. (5)
Wiatt, William S., Box 1082, La Jolla, Calif.
Wiegand, Herbert C., 840 Oakbrook Lane (5)
Wiener, Meyer, Box 516, Coronado, Calif.
Wiese, Harry W., 2301 S. Kingshighway Blvd. (10)
Wilcox, Claude V., 3175 Ivanhoe Ave. (9)
Wild, Aloysius A., 3901 West Florissant Ave. (7)
Wilhelmi, Otto J., 218 University Club Bldg. (3)
Will, Leo A., 611 Humboldt Bldg. (3)
Williams, Edw. B., Jr., 4242 Easton Ave. (13)
Williams, Ray D., 114 N. Taylor Ave. (8)
Williamson, Walter E., 233 Frisco Bldg. (1)
Wilson, Henry M., Veterans Hospital, Alexandria, La.
Wilson, Hugh M., 510 S. Kingshighway Blvd. (10)
Wilson, Keith S., 4952 Maryland Ave. (8)
Wilson, Kenneth O., 1259 N. Kingshighway Blvd. (13)
Wilucki, Leo E., 5402a Gravois Ave. (16)
Wilucki, Melvin R., 5402a Gravois Ave. (16)
Wimber, Thomas C., 626 Metropolitan Bldg. (3)
Winkler, L. F., 820 Fulton Ave., Wausau, Wis.
Winter, Tyrus D., 208 Lister Bldg. (8)
Winterer, Roland A., Railway Express Bldg.
Winters, F. A., 4065 S. Grand Blvd. (16)
Wippo, Edgar W., 4600a Moraine Ave. (15)
Wirthlin, Edward H., 4143 S. Grand Blvd. (18)
Wissner, Seth, 8109 Glen Echo Dr. (21)
Witt, Clyde M., 6219 Murdock Ave. (9)
Wittwer, Hugh J., 5940 Marwinette Ave. (16)
Womble, James G., 2373 Franklin St., Augusta, Ga.
Wood, Bennett R., 3442 Geraldine Ave. (15)
Wood, Edward P., 1140 Wakefield Dr., Alexandria, Va.
Wood, William George, 1019 McCausland Ave. (17)
Woodruff, Frederick E., 4 Kingsbury Pl. (12)
Woolf, Ralph B., 630 S. Kingshighway Blvd. (10)
Woolsey, Doris S., 16 Hampton Village Plaza (9)
Woolsey, Robert D., 16 Hampton Village Plaza (9)
Wotawa, William J., 3804 Wilmington Ave. (16)
Wyloge, Elliott I., 462 N. Taylor Ave. (8)
Yaeger, Gerald A., 7158 Manchester Ave. (17)
Yarbrough, William C., 6452 Smiley Ave. (9)
Yore, Richard W., 1115 Terry Ave., Seattle, Wash.
Yost, Paul W., 5740 Cates Ave. (12)
Young, Leo P., 2621 S. Jefferson Ave. (18)
Young, Lillian V., 819 E. Central Ave., Redlands, Calif.
Younge, Walter A., 2337 Market St. (3)
Younger, Anita, 3624 Russell Ave. (10)
Younger, Ernest, 3624 Russell Ave. (10)
Younger, Jesse, 620 Missouri Theatre Bldg. (3)
Youngman, George A., 5439 Gravois Ave. (16)
Zahorsky, John, Steelville, Mo.
Zahorsky, Theodore S., 16 Hampton Village Plaza (9)
Zeffren, Joel L., 1515 Lafayette Ave. (4)
Zeinert, Oliver B., 7246 Pershing Ave. (5)
Zeitler, William T., 3102 S. Grand Blvd. (18)
Zentay, Paul J., 8515 Delmar Blvd. (24)
Ziegelmeyer, John S., 3733 Lindell Blvd. (8)
Zillgitt, George H., 4501a Manchester Ave. (10)
Zingale, Frank G., 16 Hampton Village Plaza (9)
Zink, Oscar C., 9 The Orchards (5)
Zwart, Claude H., 719 Missouri Theatre Bldg. (3)

ST. LOUIS COUNTY MEDICAL SOCIETY
(St. Louis)

Alex, Morris, 8811 Wrenwood
Altheide, Harvey E., 9621 Manchester, Rock Hill
Armstrong, John H., 321 N. Kirkwood Rd., Kirkwood
Avery, Bruce F., 3714 Washington Ave.
Backlar, Joseph, 1025 McKnight Rd., Richmond Heights
Bailey, William H., 1242 Missouri Theatre Bldg.
Barnes, Francis M., 1952 Maryland Ave.
Barnes, Raymond F., 22 N. Elm Ave., Webster Groves
Barnett, Julian H., 10424 Manchester Rd., Kirkwood
Bassett, Sam A., 1200 Big Bend Blvd., Richmond Heights
Bauer, Joseph A., 101 S. Meramec Ave.
Bauer, Robert A., 6153a Natural Bridge
Beam, Sim F., 35 N. Central Ave.
Beasley, L. Kenneth, 16 Hampton Village Plaza
Bennett, C. Edward, 207a N. Kirkwood Rd., Kirkwood
Berger, Edward J., 457 N. Kingshighway Blvd.
Bergmann, Martin, 9057 North Swan Circle, Brentwood
Bernstorff, Paul H., 8330 Jennings Rd., Jennings
Berwald, Irwin I., 4155 N. Newstead
Bishop, Marion D., 740 St. Francois Ave., Florissant
Blackman, Nathan, 300 Altus Pl., Kirkwood
Boles, Clifford R., 35 N. Central Ave., Clayton
Bortnick, Arthur R., 520 Midvale Ave.
Brand, Earl L., 120 E. Lockwood Ave., Webster Groves
Briscoe, John R., 2648 Oakview Terrace, Maplewood
Brossard, Pierre M., 3500 Cambridge Ave., Maplewood
Brown, Eugene R., 7433 Gannon Ave., University City
Brown, Wm. Sidney, 410 Wall Bldg.
Brown, Wilson G., 3011 Stanton Ave., Houston, Texas
Burford, Thomas H., R. 1, Box 620, Clayton
Bussmann, Donald W., 908 Crescent Dr., Clayton
Caciappo, Joseph E., 3861 St. Louis Ave.
Canepa, Francis J., 7215 Northmoor Dr.
Canepa, John B., 3417 Longfellow Blvd.
Cohen, Frank, 5899 Delmar Ave.
Cohle, Richard R., 6328 Washington Ave.
Coldwater, Kenneth B., V. A. Hospital, Jefferson Barracks
Coleman, William G., 3903 Olive St.
Colgate, Cleon E., U.S.N.R. Vets. Admin., Amarillo, Texas
Collins, John M., 9438 Gravois Ave., Affton
Compton, James R., 6122a Page Blvd.
Cone, Alfred J., No. 2 Woods Mill, Chesterfield
Cook, Robert J., 8529 Douglas Ave., Brentwood
Cooke, Jean V., 6130 Garesche Ave.
Costrino, John J., 2407a N. Broadway
Costrino, Joseph A., 922 Jeanerette Dr.
Coulter, Robert L., Jr., 4108 W. Florissant Ave.
Crawford, Katherine J., 7170 Washington Ave.
Creekmore, Maurice A., 815 Dugan St., Jefferson Barracks
Cutler, Harry, 209 University Club Bldg.
Daly, John R., 3763 Mission Blvd. San Diego, Calif.
Davidson, Morris, 35 N. Central Ave., Clayton
Davis, Edgar W., 3805a S. Broadway
Davis, Irl R., 1506 Hodiamont St.
Dean, Lee Wallace, Jr., 101 S. Meramec, Clayton
Denny, Robert B., 7827 Delmar, University City
Deutch, Max., 8515 Delmar Blvd.
Diehr, Maurice A., 8924a St. Charles Rock Rd.
Dill, Foster A., 7348a Manchester Ave., Maplewood
Domke, Herbert R., 651 S. Brentwood Blvd., Clayton
Donley, Leo F., Jr., 4986 Rosalie
Dowd, James F., Jr., 6255 Pershing Ave.
Drescher, Emmett B., 411 Beaumont Medical Bldg.
Drum, Helen M. A., R. R. No. 1, Box 655, Clayton
Dulick, Michael, 9012 Manchester Rd., Brentwood
Ellis, Calvin C., 8232 Appelton Dr., University City
Ellison, Leroy E., 7346 Myrtle Ave., Maplewood
Elson, Julius, 607 N. Grand Blvd.
Evans, John C., Barnes Hospital
Farris, H. G., 45 Bellerive Acres
Ferrara, John P., 7307 Natural Bridge
Fingert, H. H., 4952 Maryland Ave.
Finkel, Barney W., 6510 W. Florissant Ave.
Finley, Freeman L., 9416 Lackland Rd., Overland
Fletes James W. 6900 Clayton Rd.
Flynn George W. 19 Clayton Terrace
Forsman Waldo W., Jr., R. No. 6, Box 2372, Sappington
Foster, Robert L., 3548 S. Grand Blvd.
Franklin, Harold A., 7824 Stanford Ave.
Freiheit, Harold J., 3941 Holly Hills Blvd.
Froelich, Edwin J., 7321 Overbrook Dr.
Fuchs, George J., 6 W. Sherwood Dr., Overland
Gaines, Quentin McD., 508 N. Kirkwood Rd., Kirkwood
Gallagher, Donald M., 50 Del Casa Dr., Mill Valley, Calif.

Gaston, Ralph E., 1276 Lay Rd., Richmond Heights
Gaunt, Frank P., 13a N. Gore, Webster Groves
Gebert, Clara M., Valley Park
Gibstine, Marvin H., 101 S. Meramec Ave.
Gitt, Joseph J., No. 6 Lake Forest, Richmond Heights
Goldman, Hyman J., 457 N. Kingshighway Blvd.
Gollub, Samuel W., 4500 Olive St.
Goodman, J. N., 9 Frederick Lane, Glendale
Goodman, Nathaniel, 4007 W. Florissant Ave.
Goodrich, Harold A., 19 E. Lockwood Ave., Webster Groves
Gowen, Leo F., 549 Locust Ct.
Graeser, Richard G., 306 E. Jefferson Ave., Kirkwood
Gray, Walter C., 8938 St. Charles Rd.
Green, Manuel E., 1144 Missouri Theatre Bldg.
Gregory, Jack A., Jr., U.S.A.F. (MC) 3640th Medical Gp., Laredo A. F. B., Texas
Griot, Albert J., 3109 S. Grand Blvd.
Gronau, Axel R., 940 Missouri Theatre Bldg.
Groom, Horace E., 1359 McCutcheon Rd., Richmond Heights
Grosskreutz, Joseph A., 3601 Canna Dr.
Grundmann, William H., 3118 N. Grand Blvd.
Hageman, Paul O., 1018 Beaumont Medical Bldg.
Hale, Tyre H., 205 Roosevelt Hotel Bldg.
Hall, Eugene W., 25a S. Florissant, Ferguson
Halpern, Lawrence K., 462 N. Taylor Ave.
Hamilton, Caldwell K., 35 N. Central Ave.
Hampton, Oscar P., Jr., 8153 Stanford Ct.
Hamtil, Edward W., 1504 S. Grand Blvd.
Handler, Fred P., 406 Med. Gen. Lab. APO 500, c/o P.M., San Francisco, Calif.
Hanlon, Thomas J., V. A. Hospital, Muskogee, Okla.
Hans, Willard J., 4335 Virginia Ave.
Hanser, Otto C., 3012 Lafayette Ave.
Hardy, Guerdan, 110 S. Central Ave., Clayton
Harrison, Stanley L., 8023 Crescent, Clayton
Harvey, Alexander E., c/o Kankakee State Hospital, Kankakee, Ill.
Heid, Lloyd L., 2739 N. Grand Blvd.
Heideman, Milo L., 1167 Center Dr.
Helbing, Edward J., 3903 Olive St.
Hendin, Aaron, 1028 Groby Rd., University City
Hengen, Henry E., Pattonville
Hertel, Albert L., 3606 Gravois Ave.
Hobbs, Alonzo G., 3903 Olive St.
Hobbs, Clarence L., 409 Chemical Bldg.
Hobbs, John E., 630 S. Kingshighway Blvd.
Hofsommer, Armin C., 337 W. Lockwood Ave., Webster Groves
Holscher, Edward C., 517 Beaumont Medical Bldg.
Howe, Louis F., 8806 Harrison Ave.
Huck, Frank F., Fenton
Hughes, Clarence O., 9a S. Florissant Rd., Ferguson
Hughes, Robert G., Olive St. Rd. at Ballas Rd., Creve Coeur
Irick, Carl C., 227 E. Lockwood Ave. Webster Groves
Jacobs Frederick A. 4952 Maryland Ave.
Jansen Richard W. 1104 Missouri St., Kirkwood
Jensen, Julius, 502 Beaumont Medical Bldg.
Johnson, Roy, 40 N. Florissant Rd., Ferguson
Jolly, William H., 322 Beaumont Medical Bldg.
Jones, Augustin, 634 N. Grand Blvd.
Jones, Dorothy J., 110 S. Central Ave., Clayton
Jones, Garnett, St. Clair
Jones, James B., 9335 Sonora Avenue, Brentwood
Kahn, Lawrence, 101 S. Meramec St.
Kelley, Walter L., 9915 Gravois Ave., Affton
Kendis, Joseph B., 462 N. Taylor Ave.
Kent, Leonard, 5333 Babcock Ave., N. Hollywood, Calif.
Kessler, Joseph J., 3504 N. 14th St.
Kilker, Clarence H., 3121 N. Grand Blvd.
Kilker, Donald E., 3121 N. Grand Blvd.
Kimelman, Nathan, 7044 Stanford Ave.
King, Eustace E., III, 2114 E. Grand Ave.
Kingsland, Robert C., 31 N. Brentwood, Clayton
Kinsella, Edward D., 3720 Washington Ave.
Kloecker, Herman J., 9621 Lackland Rd., Overland
Kloeppel, Carl F., R. No. 12, Box 212, Kirkwood
Koch, Otto W., 35 N. Central Ave., Clayton
Koch, Robert E., 35 N. Central Ave., Clayton
Koerner, Kenneth A., 7803 Clayton Rd., Clayton
Koessel, Arthur W., 640 Missouri Theatre Bldg.
Konzelman, John A., 6677 Delmar Blvd.
Kopp, Jules H., 508 N. Grand Blvd.
Kuritz, Albert B., V. A. Hospital, North Little Rock, Ark.
Kuttner, Marianne, 8515 Delmar Blvd.
Langenbach, Alfred M., 6200 Hoffman Ave.
Leidler, Franz, 707 N. Forest Ave., Webster Groves
Lerner, Abe F., 7545 Parkdale Ave., Clayton
Leslie, Charles H. 209 S. Kirkwood Rd., Kirkwood
Levey, Simon A., 7807 Walinca Terrace
Lewin, Wilbur H., Frisco Bldg.
Loving, B. Rush, Ballwin
Luckey, Horace L., 2816 Sutton Ave., Maplewood
Luedde, Fullerton W., 35 N. Central Ave.
McCall, Edwin L., 9012 Manchester Rd., Brentwood
McCarthy, Thomas D., U. S. Naval Air Station, Lambert Field, Bridgeton, Mo.
McCaughan, John M., 505 Humboldt Bldg.
McClure, David N., 7803a Clayton Rd.
McGowan, Hugh D., Address Unknown
McLean, Royal C., 126 E. Jefferson Ave., Kirkwood
McNalley, Frank P., 3720 Washington Ave.
McNearney, Joseph, 7308 Glades Ave.
McShane, Quentin W., 207 Lister Bldg.
Macdonald, William C., 201 Humboldt Bldg.
Magidson, Joseph, 615 Forest Ct.
Magness, Guy N., 6651 Enright Ave., University City
Mahe, George A., 135a N. Hanley Rd., Clayton
Manganaro, Frank J., 2511 Melvin Ave., Brentwood
Marcus, Morris D., University Club Bldg.
Marmor, William A., 607 N. Grand Blvd.
Martin, Frederick W., Jr., Box 416, R. R. No. 5, N. Geyer Rd., St. Louis County
Martz, John C., 237 Spencer Rd., Webster Groves
May, Benjamin F., 601 Humboldt Bldg.
Mayer, Robert A., 505 Humboldt Bldg.
Mazur, Herbert A., 337 N. Euclid Ave.
Mead, Sedgwick, 600 S. Kingshighway Blvd.
Meador, James R., 4 S. Central Ave., Clayton
Meagher, Arthur J., U. S. Naval Hospital, Portsmouth, Va.
Mendonsa, Elsa L., 504 N. Central Ave., University City
Merritt, Burch A., 7309 Natural Bridge Rd.
Miles, Paul W., 602 S. Euclid Ave.
Missey, Wilburn C., Jr., Conway & Ballas Rds.
Molden, Charles A., 845 Warder Ave.
Monat, Seymour, 5367 Pershing Ave.
Moore, Harry G., 1801 Chouteau Ave.
Moore, William E., 7315 Pasadena Blvd., Normandy
Moss, William T., Ellis Fischel State Cancer Hosp., Columbia
Mullarky, Wilbur A., 7513 Leadale Dr.
Nakada, James R., 504 Humboldt Bldg.
Nash, W. Hampton, 915 Olive St.
Niederwimer, John, Koch Hospital, Koch
North, William R., Address Unknown
Nussbaum, Robert A., 3701 Grandel Sq.
Obrock, Louis C., 779 LeMay Ferry Rd.
O'Connell, John, 10300 Lackland Rd., Overland
Ott, Harold J., 2816 Sutton Ave., Maplewood
Owens, Bert O., 744 Missouri Theatre Bldg.
Paddock, Richard, 6154 Westminster Pl.
Park, George M., Box 6, Eureka
Pawol, S. E., 2573 Woodson Rd.
Petersen, Fenton J., 1005 Big Bend Rd.
Pfeffer, Robert I., c/o Robinson, 807 Warson Rd.
Phillips, Hanford, 1117 N. Union Blvd.
Rachlin, Maxwell, 1695 S. Brentwood Blvd., Brentwood
Ramsey, R. H., 4952 Maryland Ave.
Reese, A. Victor, 120 E. Lockwood Ave., Webster Groves
Reilly, Pierce J., 730 Hodiamont Ave.
Reinhard, Edward H., 235 Sylvester Ave.
Reulbach, Franklin P., Address Unknown
Richtarsic, Stephen R., 35 N. Central Ave., Clayton
Roberts, John P., Barrett Station Rd., Kirkwood
Roberts, John R., 8649 Rosalie Ave., Brentwood
Robinson, Edith C., Address Unknown
Roblee, Melvin A., 101 S. Meramec Ave.
Rogers, C. H., 914 Arcade Bldg.
Rogers, John A., 527 Warren Ave., University City
Rohlfing, Edwin H., 816 Beaumont Medical Bldg.
Rosenberg, Henry E., 1467 N. Union Blvd.
Ross, Herman C., 1695 Brentwood Blvd., Brentwood
Roufa, Joseph F., 409 Humboldt Bldg.
Rouse, Ernest T., 1011 Beaumont Medical Bldg.
Rupe, Wayne A., 453 N. Taylor Ave.
Rutledge, Paul E., 411 N. Kirkwood Rd., Kirkwood
Ryan, John J., 28 Ridgetop Dr., Clayton
Salisbury, William J., 3548 Sidney St.
Schattyn, Martyn, 505 Humboldt Bldg.
Scheele, Paul M., 597 Purdue Ave., University City
Schewe, Elmer J., Jr., 317 Edgewood Dr., Clayton
Schluer, Elmer P., 340 Beaumont Medical Bldg.
Schmidt, Edmund M., 6704 W. Florissant
Schneider, Sam, 303 Lister Bldg.
Schopp, Alvin C., 505 Humboldt Bldg.
Schultz, Samuel, 2813a Watson Rd.
Schwartz, Alfred S., 462 N. Taylor Ave.
Schwartzman, Bernard, 462 N. Taylor Ave.
Scott, Henry F., Ballwin
Seabaugh, Ottis D., 105 W. Lockwood Ave., Webster Groves
Selle, Harold C., 1034 Packard St., Ferguson
Sharp, Cecil A. Z., 9243 Clayton Rd., Ladue
Shatz, Burton A., U. S. Naval Hospital, Philadelphia, Pa.
Shaver, Nellie A., 2739 N. Grand Blvd.
Shepherd, Charles T., 1259 N. Kingshighway Blvd.
Shobe, Frank O., 4500 West Pine Blvd.
Shuford, Wade H., Dept. of Radiology, Camp Kilmar, Camp Kilmar, N. J.
Silverberg, Charles, 8537 Bryan Ave.
Simril, Wayne A., 35 N. Central Ave., Clayton
Skilling, David M., Jr., 18 S. Kingshighway Blvd.
Skinner, John S., 7379 Pershing Blvd., University City
Smit, Herbert M., 3908 Olive St.
Smith, David E., 6834 Waterman Ave., University City
Smith, William A., 16 N. Gore Ave., Webster Groves
Sommer, Conrad S., 453 N. Taylor Ave.
Spitz, Milton A., 462 N. Taylor Ave.
Spitzer, Ernest, 6637 Kingsbury Blvd., University City
Spoeneman, Marlin C., 7380 Overbrook Dr.
Staehle, Melvin E., 7124 Natural Bridge Rd.
Standley, Eugene T., U. S. Naval Hospital, Portsmouth, Va.
Stein, Harry J., 6917 W. Florissant Ave.
Stein, Leon A., 2618 Oregon Ave.
Steiner, Alexander J., 8009 Gannon Ave.
Stephens, William A., 204 Pasteur Bldg.
Sterling, Charles E., 2050 North & South Rd.
Sterling, John A., 7266 Manchester Ave., Maplewood

Stewart, Frances H., 7161 Delmar Blvd.
Stickle, A. W., 924 Arcade Bldg.
Stocking, Lyman C., 14 Sweet Brier Lane, Kirkwood
Stoelzle, Joseph D., 104 W. Adams Ave., Kirkwood
Strauchen, Gilbert W., 337 W. Lockwood, Webster Groves
Stuebner, Roland W., 5 Indian Hill, Clayton
Sutter, Richard A., 7215 Greenway
Tashma, Sigmund, 4500 Olive St.
Taylor, Duane R., 1414th A.B. Gp. Hospital, APO, P.M., New York, N. Y.
Teiber, Frederick W., 3201 Washington Blvd.
Teneglia, Eutimio D., 706 Missouri Theatre Bldg.
Townsend, James A., 915 DeMun Ave., Clayton
Townsend, Vincent F., 3101 Sutton Ave., Maplewood
Treiman, Robert C., 7369 Maryland Ave.
Tremain, E. E., 2901 Big Bend Rd., Maplewood
Trueblood, Alva C., Jr., 8505 Delmar Blvd.
Tureen, Louis L., 457 N. Kingshighway Blvd.
Ulett, George A., 54 Picardy Lane
Ulett, Pearl C., 54 Picardy Lane
Vigo, Anthony W., U. S. Army Hospital, Camp Crowder, Mo.
Vinyard, Paul, 3718a Olive St.
Vitale, Anthony J., 3861 St. Louis Ave.
Vitale, Nicholas S., 7276 Ravina, Normandy Branch
Vizgird, J. J., 5022 Page Blvd.
Vollmar, Clarence J., 55a W. Big Bend Rd., Webster Groves
Votaw, Robert E., 10 Warson Terrace, Clayton
Wachter, Harry E., 203 Beaumont Medical Bldg.
Wall, Albert, 5322 Helen Ave.
Walther, Roy A., 2438 Woodson Rd., Overland
Walther, Roy A., Jr., 8901 Shawnee Lane, Overland
Walton, Josiah H., 250 N. Forsyth Blvd., Clayton
Waters, E. B., 126 E. Jefferson Ave., Kirkwood
Weber, Sol, 336 University Club Bldg.
Weber, William K., 3938 Canterbury Dr., Normandy
Weisman, Sol, 4500 Olive St.
Weitman, Maximiliam, 3530a Arsenal St.
Werth, Duncan S., 124 E. Adams St., Kirkwood
West, Joseph W., 906 Olive St.
Westrup, Arthur W., 204 E. Big Bend Rd., Webster Groves
Westrup, Ellsworth A., 219 E. Jackson Rd., Webster Groves
Whitener, Paul R., 8923 Midland Ave.
Williamson, O. E., 6336 Clayton Rd.
Wissmath, Frank S., 35 N. Central Ave., Clayton
Wulff, George J. L., Jr., 12 Princeton Ave., University City
Wurzer, Arnold H., 3115 Brown Rd.
Wyatt, Lois C., 124 E. Adams Ave., Kirkwood
Yanow, Mitchell, 35 N. Central Ave., Clayton
Yost, Walter B., 6635 Delmar Blvd., University City
Young, John S., 1126 St. Louis Ave.
Zeitler, Walter A., 2554 Hord Ave., Jennings

SALINE COUNTY MEDICAL SOCIETY

Aiken, George A., Marshall
Aiken, Richard F., Marshall
Bickford, Wallace M., Address Unknown
Doyle, Joseph P., Washington
Haynes, Robert C., Marshall
Haynes, Robert C., Jr., 7 Hickory Lane, Belmont, Mass.
Jones, Ralph H., Sweet Springs
Kennedy, Robert W., Marshall
Lawless, Chas. L., Marshall
Lawrence, John R., Marshall
Lockwood, W. E., Slater
McBurney, C. A., Slater
McCorkle, E. Lee, Horton, Kansas
Madison, Waite H., Marshall
Mead, Samuel T., Slater
Nix, Winston K., Marshall
Reid, James A., Marshall
Robinson, Don, Address Unknown
Roehrs, Marvin E., Marshall
Sharp, William L., Warwick Hotel, St. Louis
Simmons, Sterling P., Marshall
Sullivan, B. Hazard, Miami
Veatch, Charles A., Air Surgeons, 7th Air Div. Hqs., APO 125, New York, N. Y.

SCHUYLER COUNTY
(North Central Counties Medical Society)

SCOTLAND COUNTY
(Lewis-Clark-Scotland County Medical Society)

SCOTT COUNTY
(Semo County Medical Society)

SEMO COUNTY MEDICAL SOCIETY
(Stoddard-New Madrid-Mississippi-Scott)

Arst, Daniel B., Bloomfield
Brandon, John P., Essex
Bruce, Leo A., Sikeston
Buckthorpe, Thelma C., Sikeston
Carter, Harvey W., Sikeston
Chandler, Orville B., Osceola
Cline, Jesse A., Oran
Critchlow, William C., Sikeston
Davis, Wilbur L., Charleston
Dernoncourt, John E., Charleston
Dieckman, William C., Dexter
Dorris, George T., Illmo
Dunaway, Howard A., Sikeston
Ellis, Burnett E., Gideon
Ferguson, Wilson J., Sikeston
Finney, William O., Chaffee
Harris, Hinman A., 7331 Canton St., University City
Husted, George W., Parma
Hux, William J., Essex
Jones, Edward E. Lilbourn
Killion, John J., Portageville
Lee, A. E., Illmo
McClure, Thomas C., Sikeston
Marshall, Alfred H., Charleston
Martin, Albert J., East Prairie
Martin, Andrew D., Sikeston
Martin, Samuel P., East Prairie
Nienstedt, Elam J., Sikeston
Painter, L. B., Jr., Portageville
Reeder, Charles C., New Madrid
Roberson, John H., Lilbourn
Rolwing, E. Charles, Charleston
Sample, George A., Chaffee
Sargent, Alden P., Sikeston
Sarno, S. M., Morehouse
Smith, Audra B., Sikeston
Smith, Louis J., New Madrid
Throgmorton, Howard B., Sikeston
Touhill, Neal J., Dexter
Urban, Edgar D., Sikeston
Waddle, Theo. L., Dexter
Weisbrod, Wilfred B., East Prairie
Whitaker, Topsy T. H., East Prairie

SHANNON COUNTY
(Carter-Shannon County Medical Society)

SHELBY COUNTY
(Marion-Ralls-Shelby County Medical Society)

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY
(Howell-Oregon-Texas-Wright-Douglas)

Ames, Alfred C., Mountain Grove
Bohrer, E. Claude, West Plains
Burns, Thomas J., Houston
Callihan, C. F., West Plains
Case, James W., Jr., West Plains
Connor, Samuel W., Mountain Grove
Cooper, Claude W., Thayer
Davis, Paul A., 1610 W. Fullerton Ave., Chicago, Ill.
Denney, Richard W., Mountain Grove
Doan, Deborah, Bakersfield
Frame, Homer G., Mountain Grove
Gentry, Marvin C., Ava
Hogg, Garrett S., Jr., Cabool
Kramer, Scott G., Houston
Mott, James R., Hartville
Musser, Richard E., Waynesville
Nevins, Roscoe C., Hermitage
Norman, Robert M., Ava
Perkins, Maxwell B., Willow Springs
Randall, Leslie, Licking
Reed, Henry L., Licking
Ryan, Robert A., Mountain Grove
Skaggs, Thomas R., Mountain View
Smith, Rollin H., West Plains
Toney, Lee E., Piedmont
Walker, Ambrose T., Mammoth Springs, Ark.
Wiles, Jack N., West Plains

STODDARD COUNTY
(Semo County Medical Society)

STONE COUNTY
(Ozarks Medical Society)

SULLIVAN COUNTY
(North Central Counties Medical Society)

TANEY COUNTY
(Ozarks Medical Society)

TEXAS COUNTY
(South Central Counties Medical Society)

VERNON COUNTY
(West Central Counties Medical Society)

WARREN COUNTY
(Unorganized)

WASHINGTON COUNTY
(Mineral Area County Medical Society)

WAYNE COUNTY
(Butler-Ripley-Wayne County Medical Society)

WEBSTER COUNTY MEDICAL SOCIETY

Beers, Ellsworth G., Seymour
Levitan, Morton E., Raymond, Wash.
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield

WEST CENTRAL COUNTIES MEDICAL SOCIETY
(Bates-Cass-Cedar-St. Clair-Vernon)

Allen, Claude J., Rich Hill
Allen, William H., Nevada
Allen, William H., Jr., Hume
Barger, O. B., Harrisonville
Barone, Paul L., Nevada
Beckman, William, Strasburg
Brown, William R., Pleasant Hill
Bunch, James R., Nevada
Cooper, John M., Butler
Davis, C. Braxton, Nevada
Eklund, Alfred W., Pleasant Hill
Ellett, William H., Appleton City
Ellis, Colburn H., Garden City
Hansen, Arthur L., Butler
Hartwell, Basil O., Drexel
Hatcher, Dock T., Jr., Butler
Hill, John J., Eldorado Springs
Hopkins, Thomas S., General Hospital, Kansas City
Jones, Edward S., Harrisonville
King, Elbert R., R. R. No. 2, Boise, Idaho
LaHue, L. D., Butler
Long, David S., Harrisonville
Love, Walter S., Nevada
Lusk, Charles A., Jr., Butler
Luter, Carter W., Butler
Martin, Forrest L., Nevada
Morris, Robert C., Nevada
Murray, Lotis V., Pleasant Hill
Neis, Harry B., Harrisonville
Newlon, John S., Nevada
O'Dell, Timothy T., Ellington
Parish, Isaac N., Address Unknown
Pascoe, James J., Nevada
Pearse, Roy W., Jr., Nevada
Richter, William B., Stockton
Robbins, Martin V., Peculiar
Robinson, Edward E., Adrian
Ronald, Douglas C., Butler
Scott, James U., Harrisonville
Sipes, Frank M., 805 S. 6th St., Goshen, Ind.
Todd, Thomas B., Nevada
Tracy, Herbert A., Belton
Triplett, Jacob S., Harrisonville
Wray, Rolla B., Nevada

WORTH COUNTY
(Nodaway-Atchison-Gentry-Worth Counties Medical Society)

WRIGHT COUNTY
(South Central Counties Medical Society)

BOOK REVIEWS

Doctors in Blue, by George Worthington Adams. Published by Henry Schuman, New York, New York. Price $4.00.

Doctors of the present day will find this book a very interesting medical history of the Union Army in the Civil War. It discusses the entire story, beginning with what might be called the "medical confusions of 1861." In this War, some 300,000 Union soldiers lost their lives. Confederate attacks account for only a third of these deaths; disease, for the rest. There were 400,000 cases of wounds and injuries and almost 6,000,000 cases of sickness. In the Mexican War, ten men died of disease for every man killed by the enemy. Behind the sickness and mortality statistics of the Civil War lie ignorance, stupidity, inefficiency, and jealousy. But behind them also, as the contrast with the earlier war suggests, are to be seen earnestness, cooperative spirit, and the great strides of scientific knowledge which a later generation has all but forgotten.

The Army Medical department was poorly prepared for combat, as was the Army, itself. A superannuated physician, a veteran of the War of 1812, who was more than 80 years old, was in office as Surgeon General. He remained in office because seniority had brought him there and, in the absence of any retirement law, he stayed on and on, concerned principally with pruning of the budget.

One reads this history of the Civil War with considerable embarrassment because of the useless loss of lives occasioned by the inefficiency of the medical corps. As the years went on, there finally came a Chief of the Medical Corps who tried to do things. Dr. Hammond was removed from office, however, because of the enmity of the Secretary of War and the jealousy of senior officers.

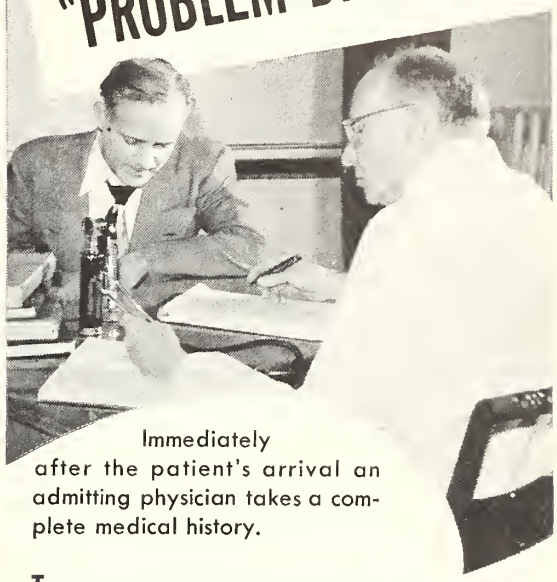
In reading this book, one must remember that in the years 1861 to 1865, little was known about infection or the transmission of disease by vectors. This war preceded Lister's monumental work in antiseptic surgery and naturally it antedated all the information comprised in aseptic surgery. "Laudable pus" was then, as the words imply, part and parcel of operative procedures. The horrors of war, insofar as the poorly prepared Medical Department was concerned, are fully set forth in this book. At the beginning of the War, there were no ambulances and practically no stretcher carriers except the bandsmen of the regiments who were detailed for this purpose. All in all, the tale is a sordid one. If one contrasts it for a moment with the medical history of World War II, one could hardly believe that so much progress had been made in the intervening years between 1861 and 1941.

The story is well told and teems with interesting events. It is to the credit of General McClellan, Commander of the Army of the Potomac, that he tried his best to improve medical conditions and succeeded in some respects. The work of Letterman, an army surgeon, represented the first awakening to what might be almost called "modern methods" which were instituted by him in some places. The services of Letterman in the Army have been commemorated by an Army hospital in San Francisco having been named after him.

There are a few interesting photographs of medical installations of the war in this book.

The interesting story is told of the work of the Sanitary Commission, a lay organization which tried its best to help out the Medical Department of the

Individualized Care for the "PROBLEM DRINKER"



Immediately after the patient's arrival an admitting physician takes a complete medical history.

Treatment of the alcoholic is more than a sobering-up process; it is a rehabilitative procedure tailored to the needs of the individual.

The physicians at The Keeley Institute have had many years' experience in treating this class of patient and are specialists in their chosen field.

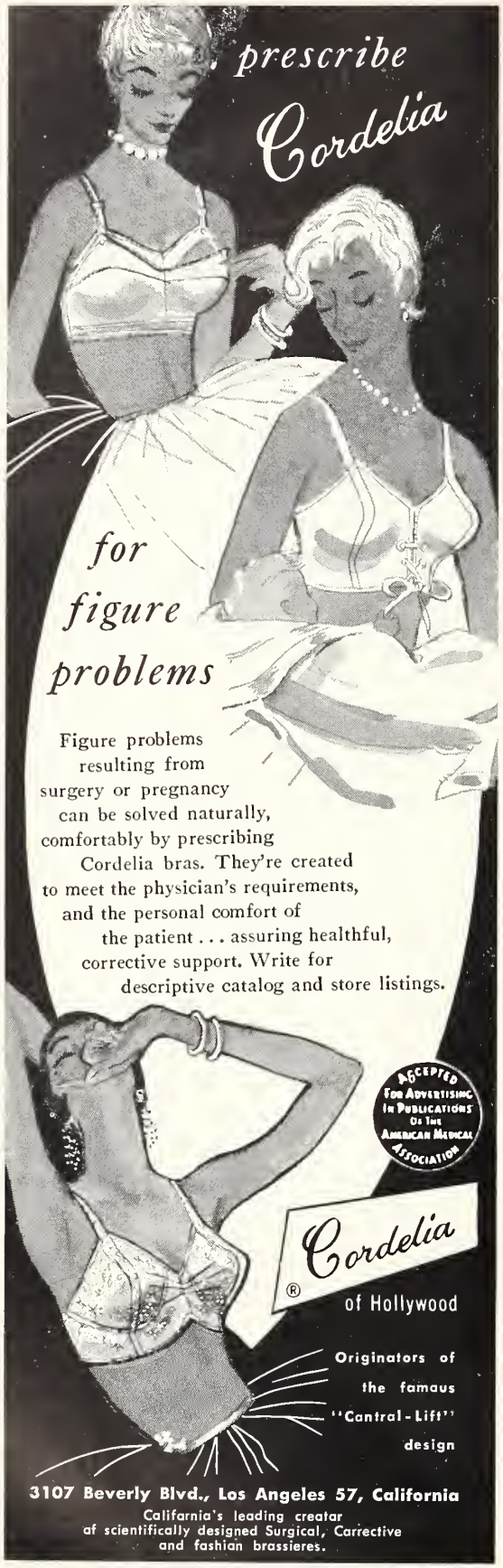
On arrival the patient is taken in hand by an admitting physician who obtains a complete medical history. This constitutes the first step toward instituting individualized care and treatment.

Subsequently, following a thorough physical examination and indicated laboratory studies, a detailed course of management can be outlined. It should be emphasized that no patient is continued under treatment unless he recognizes his problem and cooperates with the staff physicians.

Member, American Hospital Association
Member, Illinois Hospital Association
The Keeley Institute is accredited by the Council on Medical Education and Hospitals of the A.M.A.

Complete information, including rates, will be furnished to physicians on request.

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS



Army, at first opposed and later supported by the Army in its humanitarian purposes. There is an account of the advent of trained nurses into the Army.

This is a tale of our country which went into war unprepared in every respect. How it survived and won a victory passes belief. The lack of proper medical care, the ignorance of the causation and transmission of disease, the unhealthy diet, the forced marches on exhausted men, all this makes one wonder how victory was ever achieved. However, it was achieved with the terrible loss of life and with amputees of all kinds left behind as a memorial of the patriotic service of many men whose legs and arms might have been saved had there been competent medical and surgical help available.

It is a candid story of what happened in the War between the States. To those unacquainted with this story, it is recommended highly because, in every respect, it is authentic.

R. B. H. G.

PSYCHIATRIC SECTIONS IN GENERAL HOSPITALS, An Architectural Record Book, Paul Haun, M.D., Med. Sc.D., Assistant Professor of Psychiatry, Georgetown University Medical School. F. W. Dodge Corporation, New York. 1950. Price $4.00.

Dr. Haun's book reveals assiduous research and careful thinking in the problem of "Psychiatric Sections in General Hospitals." It is a book which hospital administrators and, particularly, all those working in the field of psychiatry and psychosomatic medicine can ill afford to miss. He presents concretely the great need for psychiatric facilities. His suggestions are based on recent statistics—"Including mental defectives, drug addicts, alcoholics, and other deviant personalities, the total rejection for military service in the last war for psychiatric disabilities would be close to 51 per cent." As he points out, this problem cannot be ignored. Public health and psychiatry have long been aware of the need for earlier recognition and better treatment of persons suffering from mental or nervous diseases. The prevention of application of this knowledge has been due largely to public prejudice and inertia. Many general hospitals professing to give the community service have ignored the need for psychiatric facilities in their building programs and operational activities. Proper plans for psychiatric care in a general hospital need not exclude sanatoria or psychiatric hospitals for long time care, but would provide care for psychiatric invalids who do not need to go to a psychiatric institution. It also provides proper consideration for psychosomatic medicine.

It is recommended that the general hospital integrate its services with nervous and mental institutions to serve the general health needs of the patients. The general hospital has broad obligations to the community which supports it and it must function to meet the total need of the people.

The author suggests ways for a better integrated program on a local and state level. He emphasizes the importance and need for early diagnoses and treatment in mental illness to prevent psychiatric conditions from becoming chronic and disabling because of belated attention.

Transient mental aberrations which occur during treatment of general medical and surgical cases are problems which should be handled in general hospitals. He stresses the need for trained personnel and proper equipment for treatment. He calls attention

TWENTY-SIX ℞ CENTERS TO SERVE YOU

Available to your call 17 hours daily.
365 Days of the year.

90 State Registered pharmacists to serve you—pharmacists whose only responsibility is the accurate compounding of your Rx's.

A rigid policy of professional ethics.

The Midwests most complete stock of fresh branded pharmaceuticals.

Katz Drug Company

ST. LOUIS

- 7th & Locust
- 8th & Washington
- Hodiamont & Easton
- 6150 Natural Bridge Rd.
- Sutton & Manchester

KANSAS CITY

- 8th & Grand
- 12th & McGee
- 12th & Walnut
- 12th & Baltimore
- 10th & Main
- 40th & Main
- 75th & Broadway
- 63rd & Brookside
- Linwood & Troost
- 3030 Prospect
- Independence & Hardesty
- Independence & Prospect
- Gregory & Prospect
- 15th & Cleveland
- 728 Minn., K.C.K.
- 10th & Minn., K.C.K.
- Main & Maple, Indep., Mo.
- Swift & Armour, North K.C.
- 52nd & Roe. Johnson County

ST. JOSEPH

- 6th & Francis
- 6th & Edmond

to the stigma attached to psychiatric institutions which prevent many persons from seeking proper psychiatric assistance.

Medicine has come to recognize that all fields of medicine are intimately related. The object of the physician is the care of the whole person.

Dr. Haun gives an excellent analysis of psychiatric floor plans for general hospitals which offers a practical philosophy of modern psychiatric management and therapy and economy of operation. He emphasizes the need for the architects to become acquainted with the professional philosophy of the hospital as a whole and the exact use proposed for the psychiatric unit if he is to intelligently serve his client.

Dr. Haun, a psychiatrist, has devoted himself for several years to this problem and pointed the way to a practical solution with his thoughtful analysis of "Psychiatric Sections in General Hospitals."

H. M. E.

CARDIAC THERAPY, by Harold J. Stewart, M.D., Associate Professor of Medicine, Cornell University Medical College, New York; Attending Physician, New York Hospital; Head of Division of Cardiology, Department of Medicine, New York Hospital-Cornell Medical Center. New York. Paul B. Hoeber, Inc. 1952. Price $10.00.

This book on the treatment of heart disease covers the entire field including congestive heart failure, mercurial diuretics, digitalis, anticoagulants, myocardial infarction, congenital heart disease, cardiac trauma and all other cardiac conditions and aspects thereof.

There is considerable detail throughout the thirty-four chapters and index, necessitating 622 pages. However, there is enough material so that use of further references is less likely to be required. The step-by-step plan of management of the case confronting the physician details regimens employed and medications used in specific instances. Meeting variations is also provided for adequately.

Sufficient space is given to surgical treatment of congenital heart disease, cardiac management of surgical patients and surgery in patients with heart disease. The chapter on effect of electrolyte changes in the blood on heart and circulation is a practical approach by presenting the discussions under such headings as "Clinical Manifestations" and "Electrocardiographic Signs" and making use of well chosen electrocardiograms for illustration.

Diet in heart disease receives its proper value in the management of these patients. There are sixty-eight illustrations, many of which are well selected electrocardiograms.

There is probably no book today in which physicians may turn to so much information about the management of their cardiac patients as is contained in this single volume.—F. Stanley Morest, M.D.

THE ANTIHISTAMINES, Their Clinical Application, Samuel M. Feinberg, M.D., Associate Professor of Medicine, Chief of Division of Allergy and Director of Allergy Research Laboratory; Saul Malkiel, Ph.D., M.D., Assistant Professor of Medicine, Director of Research, Allergy Research Laboratory; Alan R. Feinberg, M.D., Clinical Assistant in Medicine, Attending Physician in Allergy Clinics; Northwestern University Medical School. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago. 1950. Price $4.00.

This small volume is a two hundred page monograph which treats in great detail with the antihistamine drugs. The presentation is an orderly one, beginning with a consideration of the relative importance of histamine itself in the production of both experimental anaphylaxis, Arthus reactions and tuberculin-type reactions and, also, clinical allergic reactions. Next, the chemistry of the various groups of antihistamine drugs is inspected, with a subsequent consideration of their pharmacologic and physiologic effects. Clinical observations with the use of these drugs comprises less than one third of the contents of the book. This portion is largely an orderly summary of previous reports, for which there is an extensive bibliography. Dosage and toxicity are the topics of the remainder of the book. This work brings into one place most of what is now known about these drugs and will be invaluable to any one investigating the many aspects of the fields of clinical and experimental allergy. It is almost certain that every physician who prescribes these drugs will have a broader and more orderly concept of their usefulness and limitations if he avails himself of this information, even though a great deal of the context is probably common knowledge. C. J. S.

COSMETIC HAY FEVER?

Prescribe UNSCENTED AR-EX Cosmetics

When perfumes or scented cosmetics cause allergic reactions — prescribe UNSCENTED AR-EX COSMETICS. Clinically tested to meet your high standards. Smart, fashion-right for patient acceptance. All needed beauty aids. Send for free Formulary

UNSCENTED

AR-EX COSMETICS, INC., 1036 W. VAN BUREN ST., CHICAGO 7, ILL.

AR-EX
HYPO-ALLERGENIC
Cosmetics

Clinically tested on allergic patients for use by allergic patients

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.
Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

THE BROWN SCHOOLS
For Exceptional Children

Year-round school, including Summer Camp, for children, tiny tots through teens, with educational and emotional problems. Seven separate residence centers, both suburban and ranch, for homogeneous grouping; complete recreational and academic programs. Under the daily supervision of a Certified Psychiatrist. Full time Psychologist and Registered Nurses. Write today for View Book; full details.

BERT P. BROWN
President

PAUL L. WHITE, M.D., F.A.P.A.
Medical Director

P. O. Box 4008-J
AUSTIN, TEXAS

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

GENERAL PRACTICE-COMPLETELY EQUIPPED CLINIC. Partner leaving for Army. Prefer draft exempt G.P. under 35, qualified for general surgery. Volume and remuneration practically unlimited. Excellent hospital facilities. Missouri. Terms open. Full details in first letter. Box 185, Journal of Missouri State Medical Association, 634 N. Grand Ave., St. Louis 3, Mo.

SITUATION WANTED: General Practitioner; age 29; Family; Category IV; completing rotating internship June, 1953; Desire association with G.P. or group. Write Box 186, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

FOR SALE—Illinois-Established Clinic and Small Hospital with all equipment, excellent setup for General Practitioner, Internist, Surgeon, and O.B. Medical Group; Terms; Each Doctor should net at least $50,000 per year. Write Leonard Blameuser, 5114 Oakton St., Skokie, Ill.

GENERAL PRACTITIONER, young locum tenens for busy general practice. Town 3500, new hospital. Partner entering service. Good chance permanent association when partner returns. Salary open. Write Robert W. Smith, M.D., Marceline, Mo.

WANTED: Locum Tenens for 2 years beginning July 15th or August 1st, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

Buy
U. S. Savings Bonds

Hair Permanently Removed by Electrolysis
DOROTHY WORRELL, R.N.
233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436
Work Done on Prescription of Physicians Only

INDEX TO ADVERTISERS

Abbott Laboratories 497, 476-477
A. S. Aloe Company 479
American Meat Institute 469
Ames Company, Inc. 468
Ar-Ex Cosmetics, Inc. 572
Ayerst, McKenna & Harrison, Ltd. 517

Bayer Company 475
The Brown Schools 573
Blue Cross-Blue Shield 532

Ciba Pharmaceutical Products, Inc. 490
Coca-Cola Company 547
Cook County Graduate School of Medicine 557
Cordelia of Hollywood, Inc. 570

Fairmount Hospital 558

Hamilton-Schmidt Company 572

W. E. Isle Company 558

Kansas City Southwest Clinical Society 505
Katz Drug Company 571
Keeley Institute 569
Kent Cigarettes 548

Lederle Laboratories ..... Insert, 536, 537
Eli Lilly and Company 480
Luzier's, Inc. 498

Mead Johnson & Company 576
Medical Protective Company 574
Milwaukee Sanitarium 531

Neurological Hospital 558
Norbury Sanatorium 558
North Shore Health Resort 547

O'Connell Bros., Inc. 573

Parke, Davis & Company 466-467
Chas. Pfizer & Company, Inc. 471
Philip Morris & Co. 506
Physicians Casualty Association 546
Producers Creamery Company 557

Sanborn Company 527
G. D. Searle & Company 489

U. S. Brewers Foundation, Inc. 558
The Upjohn Company 575

Wander Company 518
West Texas Maternity Hospital 546
Whittaker Laboratories, Inc. 557
Winthrop-Stearns, Inc. 473

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in The Journal is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by The Journal when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures "*know-how*"

ST. LOUIS Office:
Robert M. Childers, Rep.,
7004 A Glenmore,
Tel. Evergreen 2950

Curiosa et Trivia

William B. McCunniff, M.D.

"The S.P.C.A. has hired a psychologist to provide free treatment for the neurotic dogs of Los Angeles." *Life,* January 19, 1953.

Estimated 300 million patients a year are afflicted with malaria, of whom 3 million die . . . over a million per year in India alone.

The total cost (for care and lost time) of rheumatism in the United States is estimated to exceed 750 million dollars annually.

The first "one stage" cholecystostomy was performed in 1867 by an American surgeon, Bobbs—by mistake. He thought he had opened an ovarian cyst!

Long labor: Dichloro-diphenyl-trichloroethane was first prepared in a pure form in 1874 by Zeidler, a German graduate student in chemistry. Now it is better known as DDT.

Industrial medicine in the raw: In 1786 Benjamin Franklin described lead poisoning from rum distilled with leaden still-heads and worms. The Massachusetts legislature immediately passed a law prohibiting such stills.

Poet John Keats was apprenticed to a surgeon in 1811-15; was allowed to break his indenture to London hospitals, permitting him to write poetry, after he had passed his exams before the Court of Apothecaries.

Dr. Harvey Cushing, reporting on his own appendectomy at Hopkins in 1896 (just check the talent), described the WBC count by W. G. MacCallum—it was 34,000: "Halstead, Finney and Bloodgood did the operation and Hugh Young gave chloroform. They used a mid-rectus incision from ensiform to pubis and got mixed up in the epigastric artery which they had to tie twenty times with heavy black silk ligatures. All these ligatures came out in the course of the next two or three months."

Dilaudid hydrochloride

(dihydromorphinone hydrochloride)

COUNCIL ACCEPTED

Powerful opiate analgesic - dose, 1/32 grain to 1/20 grain.

Potent cough sedative - dose, 1/128 grain to 1/64 grain.

Readily soluble, quick acting.

Side effects, such as nausea and constipation, seem less likely to occur.

An opiate, has addictive properties.

Dependable for relief of pain and cough, not administered for hypnosis.

● Dilaudid is subject to Federal narcotic regulations. Dilaudid, Trade Mark Bilhuber.

Bilhuber-Knoll Corp. Orange, N. J.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

THE FORCE OF IDEAS

Honorable Thomas C. Hennings, Jr.
Senior United States Senator from Missouri

Probably no group in America has contributed more to our strength as a nation than have the doctors of America, whose selfless devotion and toil has produced such great achievements in medical research, in saving precious lives and relieving human suffering. Nor has any group

Honorable Thomas C. Hennings, Jr.

stood more firmly as a bulwark against encroachments of government upon the private lives of individual citizens and the rights of states and local communities, as in the case of your fight against socialized medicine—a proposal which I, too, have always vigorously opposed as a threat to orderly development and progress in the medical field.

The medical profession in this country has, moreover, always enjoyed the protection of our Bill of Rights. It is well known and understood that no court in the land can order a doctor to divulge a patient's confidences nor cite him for contempt for failing to do so. It is precisely for these reasons that we turn to the doctors of Missouri and of the country to furnish leadership in the fight to maintain our freedoms and to give to the many people who look to them for advice and counsel a better understanding of the fundamental guarantees written into our Bill of Rights.

I cannot conceive that the members of the medical profession would passively allow a committee of self-styled experts to decree what drugs should be administered or medical services performed in a given situation. And yet, it is but a step from present Congressional attempts to dictate who shall teach in our schools, what shall be taught, and what words shall be spoken from the pulpits to extend these efforts to the throttling of the medical profession. The same freedom of inquiry, of thought and of expression which you doctors have fostered and which has brought such tremendous advances in the field of medicine, has been responsible for our growth in the fields of science, industry, education and every other phase of our national life. Where this freedom is stifled, where conformity is demanded, all progress ceases. The experiences of other countries should serve as sufficient example of what happens when dictatorship gets a foothold.

No responsible person seriously proposes that the rights and obligations of Congressional Committees to conduct investigations into matters affecting the safety and welfare of our Nation should be abridged. There is, however, I am glad to say, a growing demand from members of the Congress themselves, as well as from the general public, for the exercise of responsibility and restraint in both the scope and conduct of such investigations.

You men and women of the medical profession will never submit, I am confident, to efforts to make your profession a tool of the state, as it has become in totalitarian countries. Because of the guidance you exert as the trusted friend and adviser in practically every home in our country, because of the respect you command in your communities, you have the opportunity and the challenge to lend your influence and prestige to the cause of maintaining for our democracy those Constitutionally-guaranteed liberties which have made our Nation great. If our democracy is worth defending on the battlefields of the world, surely it is worth preserving against the abuses of tyranny at home, not with the force of arms, but with the force of ideas.

"...particularly beneficial in the treatment of hay fever."[1]

Because CHLOR-*TRIMETON*® maleate, chlorprophenpyridamine maleate, has the greatest potency milligram for milligram of any available antihistamine, and because "Chlor-Trimeton has a relatively low incidence of side reactions,"[2] it is a drug of choice for hay fever patients.

CHLOR-*TRIMETON*

maleate

1. Silbert, N. E.: New England J. Med. 242:931, 1950.
2. Eisenstadt, W. S.: Journal Lancet 70:26, 1950.

Schering CORPORATION
BLOOMFIELD, NEW JERSEY

CHLOR-TRIMETON

SCHERING

With Our G. P.'s

William J. Shaw, M.D.

Missouri general practitioners wandered far from their native haunts to attend the recent American Medical Association annual meeting in New York City but were apparently as much at home in the Big City as in St. Louis, Kansas City or rural Missouri.

William J. Shaw, M.D.

To enumerate all the Missouri general practitioners who attended the largest A.M.A. meeting in history or to refer to all the activities of the Missouri physicians would be an impossibility. At every session of the House of Delegates, constantly hovering around that Dean of Delegates, Dr. Robert E. Schlueter, St. Louis, were Doctors Paul Baldwin, Kennett; A. S. Bristow, Princeton; and Rolla B. Wray, Nevada. Our new president, Dr. Claude Bohrer, West Plains, augmented this group and they were rewarded by hearing Mrs. Oveta Culp Hobby address the House of Delegates. Drs. Baldwin and Schlueter made masterful pleas for support on a highly controversial issue close to Missouri hearts.

Dr. M. B. Casebolt, Kansas City, was an active participant in the activities of the Section on General Practice, held in the Biltmore Hotel, which was reminiscent of the A.A.G.P. annual sessions. More than 1,600 general practitioners attended each meeting of this section and were well rewarded by the excellent programs presented. Observed at the meetings were Doctors E. L. Bales, Carrollton; O. S. Barger, Harrisonville; Arthur J. Graves and F. H. Maples, Mount Vernon; George Wood, Fulton; Harry Harkness, Warrensburg; John H. Kibbe, Monroe City; Harry Davis, Rolla, and Robert C. Haynes, Marshall.

At one of the many group meetings before the A.M.A. program started, the Board of Directors of the American Academy of General Practice appointed Dr. Charles Jost, St. Louis, chairman of the Committee on Constitution and By-Laws and Dr. Jesse Rising, Kansas City, a member of the Commission on Education.

From the opening session of the House of Delegates on Monday to the last address on Friday, the general practitioner looked, listened, learned, and, in general, had a great time. Although no Missourian won the Cadillac car or the trip to Europe, all returned home with a fresh viewpoint and appreciation for a meeting that augured well for the future of American medicine.

Our Auxiliary

Highlights of the Woman's Auxiliary to the American Medical Association

Mrs. C. Alex (Helen) McBurney, *President*

The Woman's Auxiliary to the American Medical Association convened June 1 to 5, 1953, at Hotel Statler in New York City with the President, Mrs. Ralph B. Eusden, Long Beach, California, presiding. There were 1,109 officers, delegates and members present, representing forty-four states, including Hawaii.

At the general meeting on June 2, the delegation was welcomed by Dr. Peter Murray, president-elect of the New York County Medical Society. The invocation was given by His Eminence, Francis Cardinal Spellman.

Mr. Kenneth McFarland, educational director of the American Trucking Company, gave an inspiring talk "Fathoming the Fifties" at the luncheon honoring the past presidents of the Woman's Auxiliary to the American Medical Association. "The trouble with too many Americans is that they 'stand frozen' in their tracks for the things in which they believe. Americans need 'educated hearts,'" Dr. McFarland told the assembled physicians' wives. He said that to acquire an educated heart, four things were necessary:

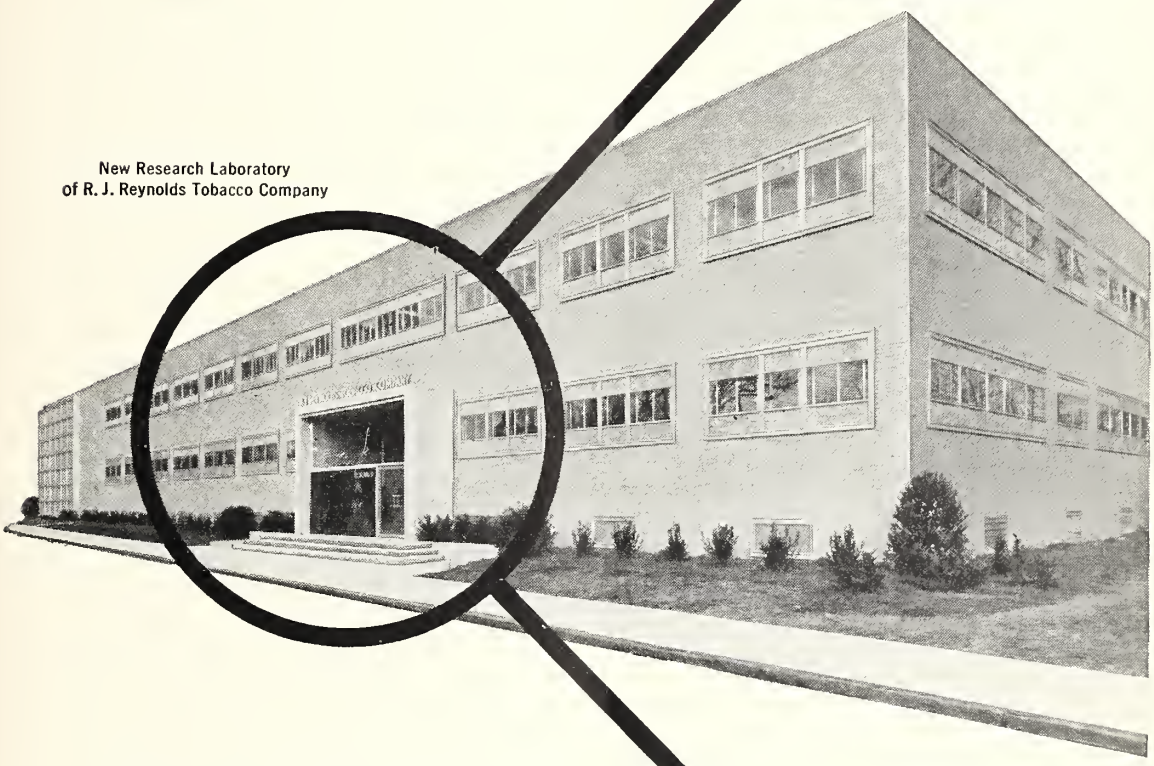
1. An honest, sincere respect for the dignity of human personality.
2. A clearer understanding of the differences between happiness and fun.
3. An enthusiasm for the things in which we believe.
4. A belief in an infinite power and enduring honor and honesty.

Mrs. Ivy B. Priest, Treasurer of the United States, was the guest speaker at the Annual Dinner for husbands and members.

On June 4, Mrs. Leo J. Schaefer of Kansas was installed as President and Mrs. George Turner of Texas as President-Elect.

The theme for 1953-1954 is "Together We Progress."

PROGRESS THROUGH RESEARCH



New Research Laboratory
of R. J. Reynolds Tobacco Company

The makers of Camels never cease their efforts to maintain and to improve the standards of quality that distinguish America's most popular cigarette.

The plant shown above, which was opened this year, is a $2,000,000 addition to Camel's research facilities.

R. J. REYNOLDS TOBACCO COMPANY • WINSTON-SALEM • N. C.

What Is Your Hobby, Doctor?

The Romance of the Old Whalers

Not many Missourians have ever seen the old-time whaling ships. Certainly none have developed a collection of this exotic early-day Americana to the extent achieved by E. Lee Dorsett, M.D., of Webster Groves.

In his den is housed almost everything pertaining to the old-fashioned whaling industry, except

a complete boat and a live whale. Rare log-books, a first edition of the literary classic, "Moby Dick," a first edition of "Cruise of the Cachalot," and many other valuable items of literature concerning the whaling industry, as it used to exist, are among his prize possessions.

Dr. Dorsett was born and reared in St. Louis, and spent summer vacations in Maine and Massachusetts. Always a lover of the sea and its folklore, through a distant relative, he obtained the log of the whaler "Alexander," that sailed from Nantucket in 1821, and this stimulated him to pursue this hobby ever since.

Modern whaling is too mechanistic to suit Lee. His true love concerns the little two hundred to three hundred ton whaling ships with which the ancient mariners ventured around the world. In those days, the whalers literally harpooned the whale by hand. And the kill was effected by multiple injuries inflicted by the seamen.

Dr. Dorsett's den is surfeited with many various types, sizes and shapes of these harpoons. He has numerous pieces of "scrimshaw," which are carvings on whales' teeth, done by sailors during their leisure time.

Dr. Dorsett's hobby has many aspects. Besides the history of whaling itself, he studies navigation and geography. The study of ships also is involved, as well as the comparative anatomy and physiology of these mammals. To study these various phases of his hobby, he has maps, spy-glasses, sextants, whale vertebrae, specimens of whale-oil, and many other things.

"The romance of the old days is gone," Dr. Dorsett states, as he describes the whaling industry which started in 1712, with headquarters in Nantucket. Due to navigational difficulties, the center gradually was removed to New Bedford, Mass. The whaling industry reached its peak in the first half of the 19th century. The discovery of petroleum wrecked the industry so that today the demand for various whale products is extremely limited.

Dr. Dorsett has exhibited his whaling relics in the St. Louis Public Library, at the St. Louis Art Museum, as well as in many other places. He has written several original articles. Perhaps the best known of these are "Around the World for Seals," published in the *American Neptune;* "Whales and Whaling," in *Horn's Magazine;* "The Brig Quantibaycook," in *American Neptune.*

We congratulate Dr. Dorsett on this very unusual and absorbing hobby.

(We would appreciate suggestions concerning our other members who have unique hobbies. V.T.W.)

Your Patients Read

Reader's Digest, May: "Why the New Anti-Polio Weapon Must Be Rationed."

Cosmopolitan, May: "What's New in Medicine" (featuring "Efocaine").

Pageant, May: "Refrigerated Surgery."

Good Housekeeping, May: "Spare Parts for the Human Body."

Woman's Life, Summer: "You May Need Cinderella Surgery."

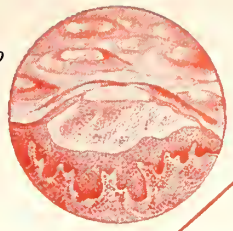
Parents' Magazine, May: "What They Are Learning About Babies in Topeka."

Better Homes & Gardens, May: "Rh Doesn't Scare Me."

Your Health: "New Ways to Prevent Kidney Stones."

Your Life, May: In "Health & Science News Notes," the simple, nonsurgical treatment of appendicitis with parenteral fluids, antibiotics and sedatives. ". . . In those who developed peritonitis due to rupture of the appendix, the same treatment as outlined above was given, plus administration of Terramycin."

A normal pregnancy is probably unparalleled in its resistance to trauma. It will survive the polka and square dance, intercourse, train wrecks, shopping melees and accidents not inducing uterine vascular damage.—E. G. Waters, M.D., *Pettis County Medical Society Bulletin.*



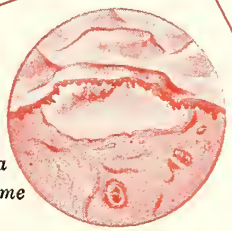
impetigo

skin infections and antibiotics

acne

pyoderma

folliculitis



erythema multiforme

Since cutaneous bacterial infections "probably account for more disability than any other group of skin diseases,"[1] the availability of broad-spectrum Terramycin has been particularly helpful in controlling these common disorders. This pure, well-tolerated antibiotic is markedly effective against the wide range of organisms often implicated as primary or secondary pathogens in skin disease. Successful clinical experience[2,3,4] in the treatment of impetigo, acne, pyodermas, erythema multiforme and other cutaneous infections recommends the selection of Terramycin as an agent of choice in common diseases of the skin. Terramycin is supplied in convenient oral and intravenous dosage forms.

1. Bednar, G. A.: South. M. J. 46:298 (March) 1953.
2. Wright, C. S. et al.: A. M. A. Arch. Dermat. & Syph. 67:125 (Feb.) 1953.
3. Robinson, H. M. et al.: South. M. J. (in press).
4. Andrews, G. C. et al.: J. A. M. A. 146:1107 (July 21) 1951.

Terramycin
BRAND OF OXYTETRACYCLINE

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.

A

Division of Health

Fluorine and Dental Caries Study in Missouri

James R. Amos, M.D., *Division Director*

The Dental Bureau of the Division of Health of Missouri and the Dental Division of the U. S. Public Health Service have completed a study of the dental caries experience of 3,206 white children in nine selected Missouri cities.

The study was made for the purpose of obtaining data from the dental caries experience in continuous resident children in the age group 6 through 14 years living in cities having different natural fluoride concentrations.

The cities and the fluoride concentrations of their water supplies are as follows:

City	*Fluorine (p.p.m.) Concentration*
Rolla	0.06
Sedalia	0.15
Chillicothe	0.20
Boonville	0.31
Jefferson City	0.40
Warrensburg	0.63
Fulton	0.86
Mexico	1.02
Columbia	1.16

These cities are comparable climatologically, economically, sociologically and ethnically. The children selected for dental investigations always used the public water supply.

There were marked differences in the total amount of dental caries experience in the cities. An inverse relationship between the dental caries experience of the fluoride concentration in the water supplies was found. There were three to four times more permanent teeth attacked by caries in the low fluoride cities (Rolla, Sedalia, Chillicothe) than in the high fluoride cities (Fulton, Mexico, Columbia.) Dental caries rates were intermediate in the middle fluoride cities (Boonville, Jefferson City, Warrensburg). Fifty-seven per cent of the children living in the high fluoride cities were caries free (Fulton, Mexico, Columbia), and 18 per cent of the children in the low fluoride cities (Rolla, Sedalia, Chillicothe) were caries free. The factor responsible for the marked difference in the dental caries rates appears to be the fluoride content of the communal drinking water. This conclusion is in line with findings from surveys in communities of other states.

Experiments are being conducted in other states in which fluorides are being added to the water supply under controlled conditions. The longest experiment, in time, about seven years, shows a reduction in the dental caries rate to more than one half in certain age group children.

Thus another member of the halogen family is added to the armamentarium in the field of preventive medicine.

The complete study was published in the July issue of the *Journal of the Missouri State Dental Association.*

Capsule Clinics

Irving A. Wien, M.D.

• Gamma globulin, a derivative of human blood, was used with some success in Texas last year to prevent paralytic polio. The Pennsylvania State Department of Health is building up a supply of gamma globulin in the event that a heavy outbreak of poliomyelitis may occur there this summer. Pennsylvania's Health, Department of Health, Commonwealth of Penn. (Jan.-Mar.) 1953.

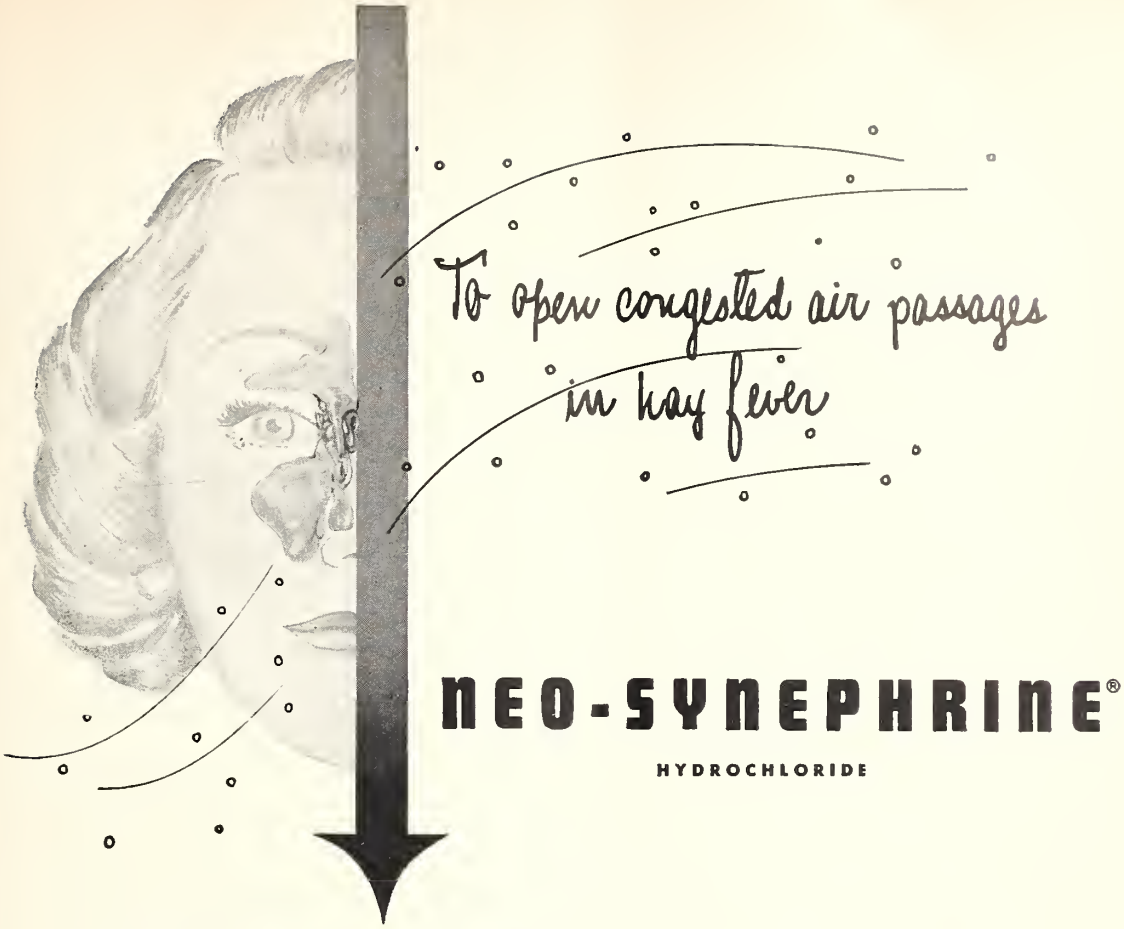
• Bilateral cryptorchidism carries with it an estimated fertility of only 10 per cent. Bilateral orchidopexy can produce a probable fertility in this group of 82 per cent. Ladd, W. E., and Gross, R. E.: Abdominal Surgery of Infancy & Childhood, W. B. Saunders Co., Philadelphia, 1948.

• Partial claviculectomy has been used in the treatment of complete separation, tuberculosis and arthritis of the acromioclavicular joint. Good functional and cosmetic results are obtained and rehabilitation is faster than with any other procedure. Wagner, C. J.: Am. J. Surg. 85 (March) 1953.

• When a serious illness or severe trauma (as surgery) or burn exists, the vitamin requirement for the first few days is five to ten times that recommended for the daily allotment of multiple vitamin preparations; thereafter two to three times this amount is required until recovery is complete. Advances in Medicine and Surgery, Graduate School of Medicine, University of Pennsylvania, W. B. Saunders Co., Philadelphia, 1952.

• There is no specific treatment for fat embolism. Aside from prophylactic measures, the most important thing is the administration of oxygen. Glas, W. W., et al.: Am. J. Surg. 85 (March) 1953.

• In iron deficiency anemia there is a virtual absence of marrow iron, and only patients with a marked reduction or absence of marrow iron (hemosiderin) will respond to iron therapy. Thus this is a method of separating the iron deficiency anemia from the anemia due to infection or blood loss. Stevens, R. S., Jr., et al.: Ann. Int. Med. 38 (February) 1953.



. . . *reduces nasal engorgement* . . .

. . . *promotes aeration* . . . *encourages drainage*

A few drops of Neo-Synephrine 0.25% in each nostril will promptly check mucosal engorgement and hypersecretion, promoting greater breathing comfort over a period of several hours.

The resultant relief to the hay fever sufferer is decidedly gratifying. Prolonged action of Neo-Synephrine makes fewer applications necessary, consequently longer periods of rest and sleep are possible.

Neo-Synephrine does not lose its effectiveness on repeated application and may, therefore, be relied upon to give relief throughout the hay fever season.

Neo-Synephrine is practically free from sting and compensatory congestion; does not appreciably inhibit ciliary activity. Neo-Synephrine has been found relatively free from systemic side effects such as nervous excitation, cardiac reaction or insomnia even when tested on hypertensive, cardiac and hyperthyroid patients.[1]

Supplied in 0.25% solution (plain), bottles of 1 oz., 4 oz. and 16 oz.; 0.25% solution (aromatic), bottles of 1 oz. and 16 oz.; 0.5% solution, bottles of 1 oz.; 1% solution, bottles of 1 oz., 4 oz. and 16 oz.; 0.125 (1/8)% solution, bottles of 1/2 oz.; 0.5% water soluble jelly, in 5/8 oz. tubes.

1. Von Alyea, O. E., and Donnelly, Allen: *Arch. Otolaryng.*, 49:234, Feb., 1949.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Neo-Synephrine, trademark reg. U.S. & Canada, brand of phenylephrine.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

I'm always a little hind time in my reading. Last night I was getting powerful sleepy when the following quote woke me up: "Physicians will never be attracted to areas now lacking them no matter if we have three times the number we now have unless facilities are made available (get that 'made available') for the practice of good modern medicine. No physician worthy of a name will settle in an area where he has to practice 'pill peddling' medicine." (Dr. Louis H. Bauer, address, S.M.A. 46th annual meeting in Miami, Fla.)

Things are coming to a purty pass when in order to practice good modern medicine a doctor must have facilities handed to him on a silver platter. He sure ain't worth a name if he hasn't the gumption to make his own facilities available. Don't reckon any doctor would be too anxious to chip in and set up a shop for the electronics man to fix his television or a dry cleaning shop so as he could get his britches cleaned. Come to think of it I don't recollect ever hearing any of them asking.

In the June issue there was an ad trying to sell a clinic that would net each doctor at least 50 grand a year. Seems like if practicing medicine brings in that kind of dough then its high time we spent some of it to provide our own workshop. There is a right sizable group of the public who feel the same way.

Me and the bank own the clinic here in Smithton. I can say me first now that I am the majority stockholder. It's right well equipped too. Not too long ago I heard one of our Union Officials say that there were several spots in the state where osteopathic physicians had built nice well equipped clinics without asking for donations.

Think maybe Pop has the right answer. He farmed all through the new deal and made a little money too. Never drowned a pig nor plowed under a grain of wheat. Got his first red cent to take from the government or anyone else less he worked for it. Pop alys says nobody has to pay him to do the things he ought to have sense enough to do for himself. Place of depending on subsidies or the other feller giving it to him he worked.

This sort of obsolete philosophy could be applied to medicine right down the line. Then we wouldn't have to subsidize kids through school, ask for donations for our schools and then have to make facilities available for them.

Your country cousin,
Pete

Others Say

This is no time for complacency, no time to foolishly assure ourselves that we have triumphed over all our difficulties, no time to call a halt to our forward march. This is the time to anchor our destiny to sound organizational fundamentals, a sane concept of general practice accomplishments and potentialities and acceptance of the irrefutable facts that all medical groups must work together if American medicine is to continue in a manner satisfactory to all concerned.

A medical organization is of little value unless it is organized for the benefits of the doctor, the patient, and mankind in general. Inasmuch as the general practitioner represents the bulk of the profession, the first and probably most important policy for the medical fraternity to follow is—don't sell the G.P. short.—*St. Louis Academy of Gen. Pract.*

. . . With sulfa drugs and antibiotics, together with blood transfusions, the course (of lobar pneumonia) is much shorter and the mortality rate is much smaller with much less work for the physician. This great discovery of new drugs in the last few years is of monumental importance and value.

Nevertheless patients still die from pneumonia and this writer would suggest that some (of the pre-1935) procedures might serve as aids to modern treatment, since death, even now, can be attributed to failure of the right ventricle.—Carl A. W. Zimmermann, III, M.D., "Remarks Concerning the Treatment of Lobar Pneumonia Then and Now," *Journal Cape Girardeau County Medical Society.*

A hopeful solution for the continuing shortage of professional nurses is the training of practical nurses to occupy positions which otherwise would have to be left vacant. Doctors recognize this and appreciate the help practical nurses can give to professional health workers. . . . The training of a practical nurse requires only one year compared with three or four years for professional nurses. It will require many more practical nurses before present needs are met. . . .—Editorial, Kansas City *Star*.

. . . We are a "union" but we have no minimum wage and have never gone on strike. We are a "trust" but we freely give our knowledge and "trade secrets" to all who will listen. We are a "cartel," a "monopoly," but our profession draws no color line, no religious line, no national origin line, but rather accepts all who are worthy. Behind these contradictions are our ideals. Please, folks, don't ever forget that when we fail to help all mankind regardless of their ability to pay, and if whenever medicine became a trade then we quickly become everything they say about us. Please, please don't let that happen.—G. Wilse Robinson, Jr., M.D., *Jackson County Bulletin.*

1 *to escape pollens*

2 alternatives for the hay fever patient

2 *to relieve symptoms*

Pyribenzamine®
hydrochloride
(tripelennamine hydrochloride Ciba)

Once atop Pike's Peak, your hay fever patient can enjoy freedom from pollens. But for patients who must remain in a high-pollen environment, you can institute this effective therapy: one or two Pyribenzamine tablets, 3 or 4 times daily.

Alone and as an adjunct to desensitization, Pyribenzamine has proved effective in relieving hay fever symptoms, as evidenced by thousands of published case reports. On the basis of this evidence, no other antihistamine combines greater clinical benefit with greater freedom from side effects.

For your prescription needs, Pyribenzamine 50 mg. tablets are available in bottles of 100 and 1000 at all pharmacies.

Ciba *Ciba Pharmaceutical Products, Inc., Summit, N. J.*

2/1920M

President's Comments

The practice of osteopathy has always received attention in Missouri. It seems now to have become a topic for consideration at the national level.

The recent American Medical Association meeting in New York was enlivened with a debate in the House of Delegates which lasted more than two hours. The subject was a report of a special committee of the Board of Trustees entitled "Study of Relations Between Medicine and Osteopathy." The report asked that action be taken at the 1954 session of the American Medical Association. A minority report was filed calling for immediate action. The debate followed and the majority opinion was upheld.

Members wishing to read the report will find it in the June 20 issue of the *Journal of the American Medical Association,* pages 734 through 739.

Edlander Bohner

Others Say

So Must American Medicine Show the Way

How rich and great the times are now! Never has such an opportunity been given to the doctor to prove to the people that Free Enterprise with him does not mean freedom to make more money for himself. If the general public ever got the idea that doctors were putting the general good of the country ahead of making money, the effect on the country would be terrific. Just as America has accepted the role of world leadership, so must American Medicine show the way in a plan for national health conservation not founded on Statism, outworn old world plans or confused schemes based on emotionalism. Such a plan must have a personal application to every individual in the country. —Edward J. Whalen, M.D., *Connecticut State Medical Journal.*

Overweight

Obesity has replaced vitamin deficiency diseases as the number one nutritional problem in the United States, according to Dr. W. H. Sebrell, Jr., director of the National Institutes of Health. Speaking before the National Food and Nutrition Institute in Washington, Dr. Sebrell estimated that one-fourth of the adult population is overweight enough to be unhealthy. In the past nutritionists cured specific nutrition-linked diseases with great success. It is now time to concentrate on the problems of obesity, Dr. Sebrell reported. At the same meeting it was reported that the average American eats 12 per cent more food than he did in pre-war years. The increase is not a caloric increase, however; vitamin-rich calorie-low foods have been added to the average diet; starches have been dropped.—R. K. P., *N. Y. Times.*

. . . If doctors wish to be held in high esteem as an accepted time-honored right of their profession, they must continue to be honorable not only with their patients, but with their colleagues. If they are not to be classed as tradespeople, competing for the almighty dollar, then they must work together in harmony and full cooperation for the preservation of the health of the community and for the preservation of their right to practice in their own way.—Allen I. Herman, M.D., *Buchanan County Medical Society Bulletin.*

A wonder drug is something you take and then wonder why you still don't feel wonderful. But the most widespread and dangerous disease today is probably "wonder drug addiction"—of one kind or another. . . . The fact of history is: All panaceas—medical, economic or political—when blindly taken by a person or a civilization are more likely to kill than to cure. A basic ingredient in every medicine is common sense.—Hal Boyle, AP.

. . . Somehow, somewhere, the doctor has lost his rugged individuality. He is content to have his professional life ordered by lay groups in great measure. He no longer is interested in becoming the mentor, friend and guardian of entire families and groups of families, but is far more interested in reporting for duty at a definite hour, completing his work at a definite time, and securing a definite salary, paid at a definite time. This may be an admirable trend toward the practice of medicine in general, but there is one ancient practitioner who could not exist under such a yoke.—Edward A. Schumann, M.D., Editorial, "Changing Ideals of Practice," *Quart. Rev. Obst. & Gynec.*

. . . Tepid sponging for the purpose of reducing fever in febrile children has long been an accepted procedure, but the methods commonly used are poor. . . . A case of acute poisoning produced by tepid sponging with isopropyl alcohol is presented. Intoxication undoubtedly was a result of inhalation and the large quantity of alcohol used in the small unventilated cubicle. Sponging with cool or cold water is a more desirable method for reducing temperature.—Roy F. Garrison, M.D., "Acute Poisoning from use of Isopropyl Alcohol in Tepid Sponging" in Clinical Notes, *J.A.M.A.*

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1953, by Missouri State Medical Association. All Rights Reserved.

Vol. 50 August, 1953 Number 8

INJURIES TO THE TARSUS BONES

REX L. DIVELEY, M.D.
KANSAS CITY
AND
RICHARD H. KIENE, M.D.
KANSAS CITY

Injuries to the tarsal bones and joints are frequent in occurrence and on the whole poorly understood both as to the basic pathology and the type of treatment that should be instituted.

Unquestionably the most frequent and the most mistreated injury of the foot comes under the broad heading of "sprain of the ankle." This injury is generally produced by stepping on an uneven surface which forces the foot into a lateral varus adducted position at the subtalar and midtarsal joints. A more accurate diagnosis of this injury, then, would be "subtalar sprain" since the lateral motion of the foot takes place in this joint and not in the ankle joint itself. Therefore the injury occurs in the ligament about the subtalar joint.

In evaluating the pathology one must remember that the ligaments of the tibiotarsal or ankle joint, while coursing from the distal ends of the tibia and fibula and inserting in the talus, also blend into the ligaments which insert into the calcaneus and scaphoid. Thus, when a sudden lateral force is exerted on the hind foot, the check ligaments of the subtalar joint are injured or torn, and often a chip of bone is pulled loose at their insertion. For this reason, every injury to the ankle should be x-rayed (fig. 1), since many such injuries may show an elevation of periosteum on the calcaneus, neck of the talus or on the superior surface of the scaphoid. Not only should the usual anterior posterior x-rays be made, but the foot should be forced into inversion or eversion as the anterior posterior plate is taken. If the extremity is too painful for this maneuver, it may be necessary to infilter the lateral ligaments or medial ligaments or both with 2 to 3 cc. of 1 per cent novocain. Only by this maneuver is it possible to demonstrate clearly complete tears of the medial or lateral ligaments, and subluxation of the ankle mortise.

When a sprain fracture of this type occurs, or in cases of complete tear of a ligament or profuse hemorrhage and swelling of the ankle or foot are present indicative of severe trauma, the extremity should be immobilized in a plaster cast extending from below the knee to the tips of the toes, with the foot in a neutral lateral position and with the ankle at a right angle. This immobilization should be continued for a week to ten days and, in severe case, from two to three weeks —this giving the ligaments time to heal. The cast should be of the walking type and full weight bearing encouraged from the earliest time possible.

Fig. 1. Severe ankle and subtalar sprain with elevation of the periosteum of the scaphoid.

The milder cases may be immobilized with a basket strapping of the foot and ankle for a week to ten days. During the period of strapping, active exercise of the ankle and subtalar joint should be encouraged, especially exercises of the peroneal muscles. If pain prevents active exercise, faradic coil stimulation of these peroneal

Delivered at the Clinical Session of the American Medical Association, Denver, December 1952.
From the Dickson-Diveley Clinic.

muscles will aid in early rehabilitation of the foot and ankle.

Following the removal of the cast or strapping, the foot should be fitted in a broad-heeled, supporting oxford, and physical therapy continued to rehabilitate the ankle and tarsal joints. Any

Fig. 2. Lateral view of the Calcaneus which does not reveal the fracture noted in figure 3.

evident foot imbalance should be corrected by supports and shoe alterations or both.

If this type of injury is treated early and adequately, no lasting ill effects will result. However, if neglected, the pain, discomfort and swelling in the hind part of the foot will persist and become most disabling.

A view of the incidence of fractures and dislocations of the foot bones seen in our clinic for the last five years reveals the following percentages: talus or astragalus, 12 per cent, os calcis or calcaneus, 56 per cent; scaphoid, 8 per cent; cuboid, 10 per cent; cuneiforms, 8 per cent, and midtarsal dislocation, 6 per cent.

TALUS

The talus, or astragalus, is intra-articular and over half of its surface is covered with cartilage. It takes part in the formation of three joints—the ankle, the subtalar and the midtarsal. Due then to this anatomic structure and its multiplicity of joint involvement, it is generally held that the final results of fractures or injuries to the talus are poor. The position of the bone in the line of weight bearing and with its many articular surfaces would indicate clearly that any deformity or distortion of the bone will cause serious disability in the ankle or subtalar joint.

Watson-Jones has given an excellent classification of injuries to the talus:

(a) *Inversion injuries.*—The most frequent are: (1) dislocation or distortion of the ankle joint, (2) dislocation of the subtalar joint and (3) total dislocation of the talus.

(b) *Dorsiflexion injuries.*—These are: (1) fracture of the neck of the talus without displacement, (2) fracture of the neck of the talus with subtalar displacement and (3) fracture of the neck of the talus with dislocation and backward displacement of the body.

(c) *Forefoot adduction.*—(1) Midtarsal dislocation (often fracture of the scaphoid).

(d) *Forefoot abduction.*—(1) tarsometatarsal dislocations (generally with fracture of the metatarsals).

As to the treatment of fractures of the talus, let us consider them as simple undisplaced fractures and complicated fractures of the talus where there is displacement.

In the simple type, in which there is little or no displacement, treat the injury simply with immobilization and adequate aftercare.

In complicated fractures of the talus in which there is displacement of one or more fragments, the fracture should be opened and an accurate reduction performed to realign the articular sur-

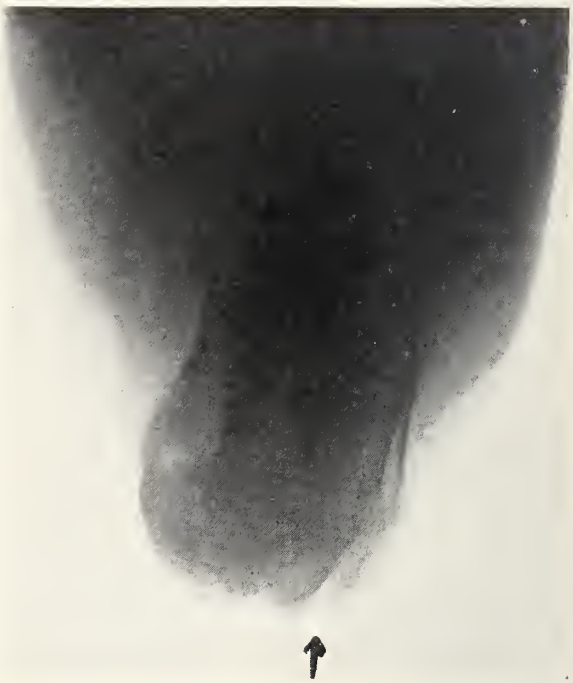


Fig. 3. Forty-five degree angle plate taken of Calcaneus which reveals a fracture not noted in figure 2.

faces of this complicated bone. When an accurate reduction is not obtainable, a subtalar arthrodesis, a triple arthrodesis or a panarthrodesis may be necessary.

CALCANEUS

Fractures of the calcaneus generally occur from falling on the foot or feet. The patient falls from a height alighting on his feet—the body weight is thrust downward through the leg and the force is transmitted through the talus to the calcaneus which is split and compressed—its width is broadened and its height is shortened.

There are many classifications of calcaneal fractures; however, we might consider our summary as simple undisplaced fractures of the calcaneus and complicated displaced fractures in which the fracture line enters the subtalar joint or the calcaneocuboid joint.

It is most important that the type of fracture of the calcaneus be most accurately differentiated because proper treatment rests on this diagnosis. Fractures of the calcaneus are most incapacitating and, therefore, deserve most careful diagnosis and treatment.

In order to make a careful evaluation of fractures of the calcaneus, not only must a careful physical examination be made, but also radiographs must be projected in at least two planes—a lateral of the foot and ankle, and a 45 degree angle projection taken in a posterior-anterior plane of the calcaneus (figs. 2, 3, 4). These two views will elicit the degree of widening or compression of the calcaneus and will also reveal the distortion of the subtalar joint or calcaneocuboid joint. When the subtalar joint has been damaged, the tuber angle is depressed from its normal 40 degree angle to as little as 5 degrees, or even zero.

In simple isolated fractures of the calcaneus, little reduction is necessary. A walking plaster cast is applied and worn for some six weeks—this to be followed by rehabilitation exercises and the proper balancing of the foot.

In mildly comminuted fractures with only widening of the bone and when the joints have not been distorted, a simple reduction by lateral compression with a carpenter's vise or the Bohler's clamp followed by a cast is the treatment of choice. There is upward displacement of the posterior portion, the tuber angle must be restored by pulling the tuberosity downward in order to restore normal length to the bone. This combined with mild lateral compression followed by a plaster boot is indicated.

In severely comminuted fractures of the calcaneus in which there has been distortion of the subtalar joint and the tuber angle has been markedly decreased, the fractured bone should be reduced by traction and compression followed by plaster immobilization for from ten to fourteen days. At the end of this period, a subtalar or triple arthrodesis should be performed. These operative procedures should be carried out before the patient has borne weight on this injured joint in order to prevent the formation of pain patterns and bring about earlier rehabilitation of the injured individual. If this fusing operation is not performed, severe arthritis of the subtalar joint will result, with marked pain and a high rate of disability.

To summarize then—in fractures of the calcaneus, treatment may be divided into three main groups:

1. In isolated and fissure fractures without displacement, reduction is unnecessary and plaster immobilization for from six to eight weeks will give a good result.

Fig. 4. Forty-five degree angle plate taken of normal Calcaneus for comparison with figure 3.

2. Fractures with displacement but without distortion of the subtalar or calcaneocuboid joints may be reduced by traction and compression, followed by immobilization in plaster. Early weight bearing is not advisable.

3. Fractures with displacement and distortion of the subtalar or calcaneocuboid joints should be reduced by traction and compression, immobilized for from ten to fourteen days and followed by subtalar or triple arthrodesis.

TARSAL SCAPHOID

Fracture of the tarsal scaphoid is generally noted in two types:

1. Fracture of the tuberosity of the scaphoid, in which case there is little displacement, should be treated conservatively in plaster immobilization for from six to eight weeks. The functional results are generally good. This fracture must be distinguished from the congenital anomaly known as accessory scaphoid.

2. Transverse fracture of the body of the scaph-

oid has little displacement of the fragments and the fragments generally can be manipulated into their proper position by pressure directed over the dorsum of the foot and at the point of displacement. The foot is held in a walking plaster cast for from six to eight weeks. Whether the distal fragment is reduced by conservative methods or replaced by operation, the results are often similar—namely, an aseptic necrosis of the major fragment and the bone assumes an abnormal shape which results in a traumatic arthritis and painful foot. In such cases, we have found relief best achieved by a triple arthrodesis correcting the flat foot condition which always develops.

Isolated undisplaced fractures of the cuboid or cuneiform bones are not common, but may result by a directed crushing blow. In such cases, the foot may be immobilized in a walking plaster for from six to eight weeks and the results are generally good if the fracture lines do not traverse the joint surfaces, in which case arthritis may result.

Midtarsal fracture dislocation is a fairly common injury which results from forcible adduction or abduction of the forefoot when the hind foot is immobilized. Reduction by manipulation is usually not difficult and should be followed by immobilization in a walking plaster for from six to eight weeks. The functional results are generally good unless the joint surfaces are severely injured in which case arthritis and great pain on weight bearing result. This disability is generally permanent; therefore, an early fusion of the involved joints is advisable.

SUMMARY

1. Subtalar sprains require accurate diagnosis and adequate treatment.

2. Displaced fractures of the talus generally heal with distortion of the articulating surfaces and result in serious disability. An accurate reduction is most essential.

3. Simple undisplaced fractures of the calcaneus should be treated conservatively and give good results with little disability. Comminuted fractures which extend into the subtalar or cuboid joints should be reduced, immobilized in plaster for a short time and an early subtalar or triple arthrodesis performed. With this procedure, the permanent disability will be at a minimum.

4. Fractures and dislocations, or either, in the midtarsal region can be replaced generally by conservative manipulation but, if the joint surfaces are severely damaged, traumatic arthritis results and the involved joints should be arthrodesed.

4312 J. C. Nichols Parkway

Others Say

"The battle against so-called socialized medicine did not end with last November's election." Charles F. Wilson, M.D., (President). "This is a medical era when obligatory staff and society meetings demand almost as much of a doctor's time as does his practice. He attends them not necessarily begrudgingly but certainly he does expect to derive something beneficial. . . . (The author) of a rambling, faltering, superfluous, unprepared report depreciates his stature. . . . A modern medical training is by necessity practically devoid of any forensic background. It does not follow, however, that because of this deficiency the doctor is issued a special poetic license to think and speak incoherently and slovenly."—D. R. Seabaugh, M.D., *Journal, Cape Girardeau County Medical Society.*

Many surgeons say that private practice consumes so much of their time that it is impossible for them to write. Later some of these men may join a group, but they are still too busy. They will always be too busy . . . A busy man can accomplish a great deal if he budgets his time . . . the surgical giants of the past—Murphy, Halsted, Cushing, the Mayos, Crile, Judd . . . probably were far busier than ninety per cent of the surgeons of this day, yet they found time to write . . .

The truth of the matter is that most of us are wasting time. Medical papers are seldom written during the busy working hours. They can be written during the long winter evenings, when the family has retired and the house is quiet. . . To write, one must be prepared to make sacrifices; but these are not overwhelming. All the surgeons aforementioned found time for travel and recreation.—"The Value of Writing for the Surgeon," by Arnold S. Jackson, M.D., J. Internat. Col. Surg., March, 1953.

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine .....0.1 mg.
Atropine sulfate .....0.02 mg.
Hyoscine hydrobromide .....0.0065 mg.
Phenobarbital (¼ gr.) .....16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.
Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

CLINICAL EXPERIENCES WITH A NEW MEDIUM (70 PER CENT UROKON—SODIUM*) IN INTRAVENOUS UROGRAPHY

JOHN E. BYRNE, M.D.
ST. LOUIS
AND
WILLIAM F. MELICK, M.D.
ST. LOUIS

IN THE LAST fifteen years, excretory urography has been recognized as a valuable diagnostic aid in medical science. Unfortunately this ready pathway of diagnostic information is beset with many pitfalls. Many of the disadvantages of excretory urograms can be laid to the door of the individual performing the examination. A careful analysis of the cases in which an excretory urogram failed to perform as it was expected will reveal an error in one of three major categories: (1) failure on the part of the physician in the form of imperfect or inadequate preparation of the patient; (2) failure on the part of the physician in attending the patient at the time of the examination and "calling his shots" in the exposure of the x-ray plates as the dye follows its physiologic course through the genitourinary tract, and (3) attempting to secure intravenous urograms on patients whose renal function is obviously so poor that inadequate pictures are a foregone conclusion. Minor objections are to be found in the various media and even in the limitations of radiographic technic. These

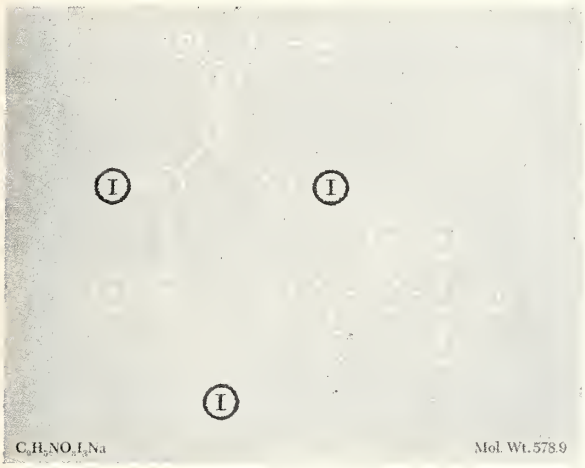


Fig. 1. Structural formula of Urokon showing position of an additional iodine atom, as compared to existing media which have at most only two iodine atoms.

things are frequently seen in many hospitals in which the average physician orders an intravenous pyelogram with no thought as to proper preparation of the patient. The next morning the patient is taken to the x-ray department, the dye injected by an intern who promptly leaves and pictures are taken at whatever intervals happen to be the hospital routine with no thought for possible renal impairment.

In an effort to overcome these objections, as well

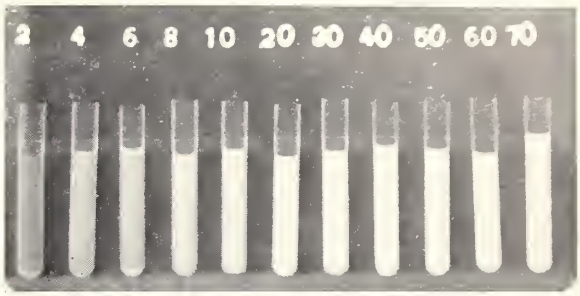


Fig. 2. X-ray photograph showing varying radiographic density of Urokon when diluted with urine of specific gravity 1.018 and pH 6.0. The numbers of each tube indicate the resulting per cent of Urokon solution.

as injecting a few of our own, we have attempted to set up a rigid routine for the performance of excretory urograms on the patients of the urologic service of the St. Louis University Hospitals, and the St. Louis County Hospital.

METHOD AND MATERIALS

The opaque medium used in all cases reported was a 70 per cent solution of Urokon* in an adult dose of 25 cubic centimeters. This dye was used in an effort to provide the kidneys with a medium of higher iodine content than media previously used. Urokon contains 65.8 per cent iodine by virtue of the additional iodine molecule attached in the formula as shown in figure 1. Our previous observations on the use of this drug in aortography and in nephrography[1, 2] have convinced us that in our hands the drug was less toxic and less likely to produce a hypersensitivity response than other existing media when used in a dosage capable of regularly producing good pyelographic density. Solutions of Urokon, even when quite dilute, show excellent radiographic density as shown in figure 2.

All of the patients in the test series were prepared in the same manner. The only patients excluded from this study group were those with obvious, marked, renal impairment as shown by a decreased urinary output or pronounced elevation of the blood urea nitrogen, and those individuals who showed a hypersensitivity response to the preliminary intravenous administration of 2 cc. of the 70 per cent Urokon.

Following the observations of Getzoff[3, 4] one half of the patients in the series were premedicated with an antihistamine (Benadryl**). The remaining 250 cases received no premedication. In those pa-

* Trade name of Sodium Acetrizoate, Mallinckrodt Chemical Works.

From the Department of Urology, St. Louis University School of Medicine, St. Louis.

* Urokon 70 per cent (Sodium acetrizoate) supplied by Dr. Melvin Thorpe of the Mallinckrodt Chemical Works, St. Louis, Missouri.

** Benadryl (diphenhydramine hydrochloride supplied by Parke-Davis and Company, Detroit, Michigan.

tients with no past history of reaction to iodine contrast medium or strong allergic reactions, a dose of 50 milligrams was given three times on the day before the examination, with an additional 100 milligrams being given one hour prior to the injection of the dye. In ten of the cases, a specific

Fig. 3. Patient in position on standard x-ray table showing 30 degree Trendelenberg position and the compression device applied to the lower abdomen.

allergic history was elicited, and these patients were given 100 milligrams of Benadryl three times in the twenty-four hour period prior to the examination, with an additional 100 milligrams being given one hour prior to the injection of the 70 per cent Urokon. Benadryl was used for these specific reasons: (1) Getzoff has shown that an antihistamine will modify the hypersensitivity response to an organic iodine compound administered intravenously. (2) The soporific action of the drug decreases the apprehension frequently felt by the patient about the examination, with a subsequent decrease in the tendency for air swallowing, a factor that has been shown to increase the amount of interferring gastrointestinal air.[5] (3) Frignani and Pezzoli[6] have shown that Benadryl decreased ureteral spasm; this was the opposite effect as observed using other antihistamines.

Particular attention is paid to the treatment of the bowel in the elimination of interfering patterns from gastrointestinal air and feces. One or two ounces of castor oil is given in fruit juice at noon on the day before the examination. On the morning of the examination, one ampule of 1:2000 prostigmine is given intramuscularly, followed in thirty minutes by a low enema. The volume of the enema is kept small, and evacuation is checked prior to the administration of the dye.

The patients are dehydrated by the elimination of both food and water for at least twelve hours prior to the injection of the dye. In infants and children we have avoided purgation and enemas and have relied on the technic of distending the stomach with either milk or carbonated beverage.[2, 6, 7]

An attempt is made to perform the examination at an early morning hour in an effort to minimize the discomfort produced by the long period of dehydration and fasting. The patient is positioned on a standard cystoscopy or x-ray table, and a preliminary scout film of the abdomen is exposed. We feel that the room in which intravenous urography is performed should be equipped to treat any possible complications which might follow the injection of organic iodine since deaths following the administration of such substances in excretory urography have been reported.[8, 9, 10] The attention to a few simple precautionary measures may avert a fatality and will restrict the number of severe reactions. Sterile ampules and syringes should be readily available for the administration of adrenalin, antihistamine, respiratory stimulants and even parenteral fluids should the occasion arise. A small cylinder of oxygen with a suitable mask for its administration should be included in the list of standard equipment.

If the scout film reveals the patient to be adequately prepared, the radiographic table is placed in a twenty degree Trendelenberg position (fig. 3), and a balsa wood compression device (fig. 4) is applied to the lower abdomen.

The contents of the sterile ampule of 70 per cent Urokon is then drawn into a 30 cc. Luer-Lok syringe that is fitted with an 18 gauge needle. A suitable arm vein is selected and punctured, the needle is positioned in the lumen of the vein to allow free exchange between the syringe contents and the venous circulation. A test dose of 1 cc. of the dye is injected and the patient is then observed for two minutes for signs of hypersensitivity. If the patient is unchanged at the end of the period of observation, the remainder of the contents of the syringe is injected in less than thirty seconds. Immediately following this rapid injection technic, a high percentage of the patients will experience a generalized sensation of warmth that may be accompanied by a visible flush. We have

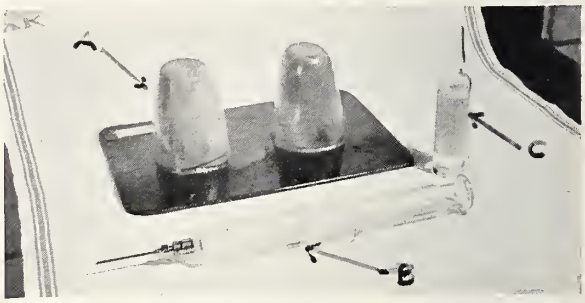


Fig. 4. Simplified equipment used in excretory urography. A. Balsa wood compression device. B. 30 cc. syringe with Luer Lok attachment for an 18 gauge needle. C. Ampule of 70 per cent Urokon.

not considered this to be an untoward reaction but rather a natural physiologic response to the administration of the drug. There has been no correlation between this early "flush response" and the subsequent reactions. Arm pain, due to

vein spasm following injection was seen in a few cases.

The exposure of the radiographs following injection of the dye is largely an individual problem. In those cases in which we desire to obtain a nephrogram, the first film is exposed within ten

TABLE 1. IODINE CONCENTRATIONS

Relative intrapelvic concentrations of contrast media at various time intervals. After the intravenous injection of 70 per cent Urokon — Na. (Specimens taken directly from renal pelvis through a ureteral catheter.)

Time Interval	*Per Cent (W/V) Urokon Na —*	*Mg. I — cc. Urine*
Control	0	0
0. - 3 min.	2.05	13.5
3 - 8 min.	6.48	42.7
8 - 15 min.	5.83	38.4
15 - 20 min.	4.90	32.3
20 - 25 min.	4.55	29.9

I.V. PSP appeared through the catheter in good concentrations in 3 minutes and the urograms were normal.

or twenty seconds of the time of injection. The first evidence of dye in the collecting system of the kidney will be seen in the normally functioning kidney in from three to five minutes. We have used this three minute film as a "base-line" for the exposure of the subsequent films. After this exposure has been made and developed it is possible to view this film and form an estimation of the time ratio of the subsequent exposure in the face of the known or estimated renal functional capacity.

Table 1 shows the actual iodine concentration during excretion of the dye as determined by analysis of specimens of urine obtained by ureteral

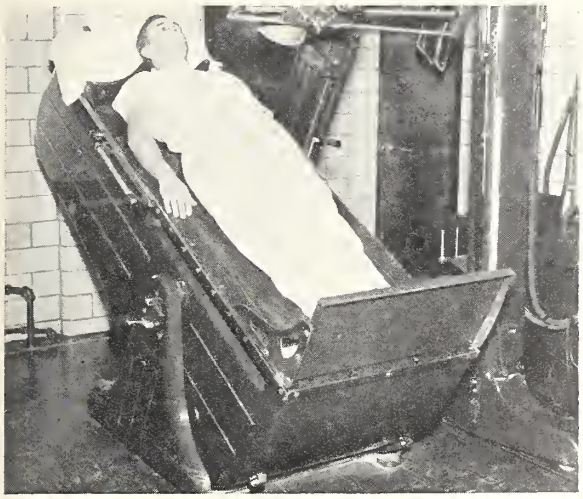


Fig. 5. Position of standard x-ray table for the production of a semi-erect pyeloureterogram after the compression has been removed. (An erect pyelogram may be made if desiderd.)

catheterization during intravenous pyelogram. Each x-ray film is viewed when wet and often while in process of development. Only by this means is it possible for the physician to completely examine the entire urinary tract. Once the dye has been seen to well outline the caliceal system, the patient is placed in the semi-erect position and the compression is removed to obtain a good pyeloureterogram (fig. 5). In cases in which it is desirable to obtain a cystogram, the patient is allowed to walk or sit up and an exposure is made ninety

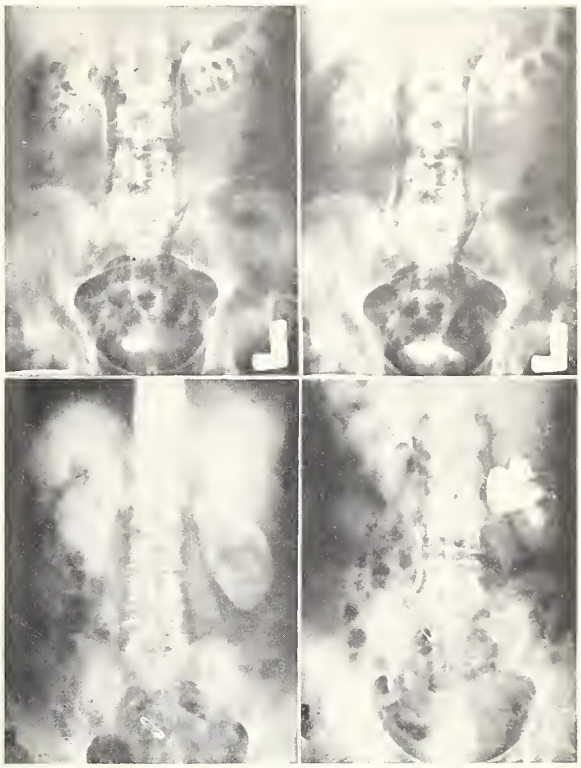


Fig. 6. 1. Eight minute pyelogram in a 50 year old male paraplegic patient with a bladder calculus. 2. Twenty minute pyelogram on the same patient as 1. 3. Nephrogram, film exposed 15 seconds following injection of 25 cc. Urokon. 4. Twenty minute pyelogram in the same patient showing the hydronephrotic left kidney.

minutes following injection and without allowing the patient to void. Figure 6 shows a series of films. The production of a cystogram is of particular advantage in those cases in which it is impossible or undesirable to instrument the lower urinary tract.

We have noticed that a 70 per cent solution of Urokon may continue to be excreted for longer periods of time following the initial injection. This is best explained on the basis of the high total molecular iodine injected. Failure of excretion of the dye at the end of sixty minutes should not complete the examination in any routine. In these cases, the patient remains fasting and is returned to his room, additional films are exposed in one, two and even eight hours, and a surprising number of malfunctioning kidneys may be visualized by this means. Figures 7 and 8 represent delayed exposures in which upper urinary tract pathologic condition was ultimately visualized.

RESULTS

The results of this study were considered in the

light of two major factors: (1) the individual response to the administration of the contrast media, and (2) the quality of the resultant pyelograms. The patient response was graded on a table that represents a composite of several criteria of hypersensitivity:

Group 1 reaction: transient nauseas without vomiting, and arm pain.

Group 2 reaction: nausea and vomiting, urticaria,

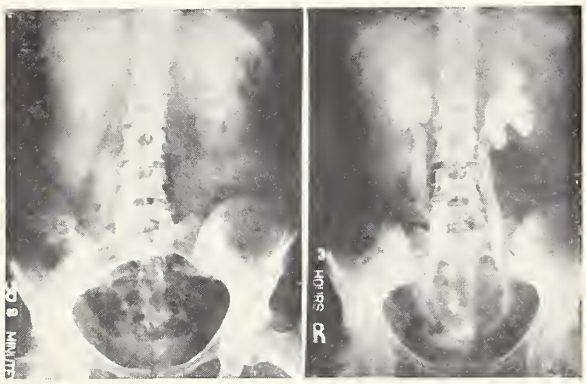


Fig. 7. 1. Eight minute pyelogram in a 50 year old white female with bilateral ure'eral obstruction due to radiation fibrosis. 2. Three hour pyelogram on the same patient showing good delineation of the urinary tract.

skin wheals, lacrymation and cough without respiratory distress.

Group 3 reactions: pronounced respiratory embarassment, persistent coughing, dyspnea and cyanosis. Vasomotor response with an alteration in the pulse or blood pressure.

Group 4 reaction: (fatality).

All reactions were considered to be immediate if they occurred within sixty minutes of the time of injection. Delayed reactions were recorded if they were seen within any period of 60 minutes to twenty-four hours of the time of injection.

The quality of the pyelogram was considered as (1) good, (2) fair, (3) poor on the basis of the radiographic delineation of the urinary tract. No provision was made for the individual renal function in grading the quality of the pyelogram.

The results in terms of response to injection are tabulated in table 2, while the results in pyelographic quality are recorded in table 3.

TABLE 2. RESPONSE TO INJECTION

Immediate Reactions		*With Benadryl**	*Without Benadryl**
No Reaction		183	175
Grade I	Nausea	36	30
Grade II	Nausea with Vomiting	15	18
Grade I	Arm Pain	6	5
Grade II	Urticaria	2	10
Grade II	Lacrymation	1	6
Grade II	Cough	5	4
Grade III	Respiratory distress	1	0
Grade III	Marked Alteration of Pulse & B.P.	1	0
Grade IV	Fatal response	0	0
	Total	250	250

* Benadryl—Trade name for diphenhydramine hydrochloride supplied by Parke-Davis and Company, Detroit, Michigan.

TABLE 3. PYELOGRAPHIC QUALITY WITH 70 PER CENT UROKON

	Number of Cases	*Percentage*
Good	396	77%
Fair	48	9%
Poor	66	14%

DISCUSSION

The use of 70 per cent Urokon in routine pyelography produced a higher percentage of diagnostic films with a minimum of side reactions than media that had been in routine use in the past in this particular group of hospitals. The use of an antihistamine as premedication to intravenous pyelography resulted in a decrease in the number of reactions that might be considered to be due to hypersensitivity to the contrast media. The degree of reaction was the most impressive feature of the use of this method. Nausea and vomiting were the most frequent reactions. Arm pain was seen infrequently and was usually due to perivenous leakage at the site of the injection. In cases of frank extravasation at the time of injection, 250 TRU of hyaluronidase in 5 cc. of saline was injected at the site of infiltration. In one case of extravasation, the patient retained a tender and indurated area in the cubital fossa for approximately three weeks. Three of the cases developed thrombophlebitis following injection of the 25 cc. dose of 70 per cent Urokon. The single severe reaction was one of respiratory distress with cyanosis and followed the injection of the 2 cc. test dose. The patient was

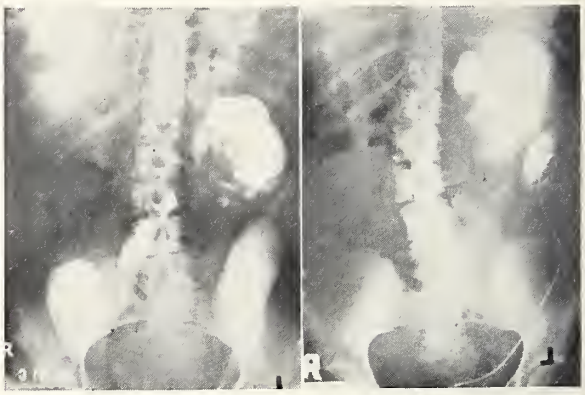


Fig. 8. 1. Three hour delayed pyelogram in a young woman with fused crossed ectopia. 2. Same patient showing retrograde filling of the renal pelvis.

treated with adrenalin and oxygen and responded without incident.

As mentioned earlier, a transient sensation of warmth, with or without flushing, frequently followed the injection of the dye and was unaltered in the group receiving the antihistamine premedication. This was not considered to be an unfavorable sequelae, but rather a physiologic response to the drug.

The cases of arm pain other than those due to actual extravasation may be due to the presence of small crystals that form in the needle and syringe following withdrawal of the solution from the ampule. This may be prevented by first warming the ampule to room temperature and by being prepared to make the injection immediately after drawing the contents of the ampule into the syringe.

In terms of quality of the urograms, 77 per cent of the cases studied gave good diagnostic films with the described method. Fair films, requiring further retrograde investigation, were obtained in 9 per cent of the cases. Poor or inadequate films were seen in 14 per cent of the patients studied. A prominent feature of the method was the quality of pyelograms seen in the older patients who under previous circumstances might have been expected to produce poor pyelographic visualization.

SUMMARY

1. The use of 70 per cent Urokon in our hands has resulted in less reactions and better roentgenologic visualization of the genito-urinary tract than any other medium that we have used.

2. The incidence of reactions and the degree of severity have been slightly reduced through the use of an antihistamine, Benadryl, given prior to the injection of the contrast medium.

3. The use of a careful routine and individualizing each case pays decided dividends in securing uniformly good results with intravenous pyelography.

4936 Nottingham.

BIBLIOGRAPHY

1. Melick, W. F.; Boler, T., and Byrne, J. E.: Translumbar Aortography With a New Contrast Medium (70 Per Cent Urokon), J. Urol. **67**:1019 (June) 1952.
2. Byrne, J. E., and Melick, W. F.: Subcutaneous Urography With 70 Per Cent Urokon, Urol. & Cutan. Rev. **55**:193-199, 1951.
3. Getzoff, P. L.: The Use of Histamine Antagonist in Intravenous Pyelography, New Orleans M. & S. J. (July) 1948.
4. Getzoff, P. L.: The Use of an Antihistamine in Intravenous Pyelography, J. Urol. **65**:1139, 1951.
5. Tremaine, J. D.; O'Connor, U. N., and Maddock, W. G.: Intestinal Gas During Pyelography, J. Urol. **65**:1129, 1951.
6. Grignani, L., and Pezbuoli, G.: Effect of Synthetic Antihistamines on Ureteral Activity, Presse. Med. **59**:1002-1005 (July) 1951.
7. Matthei, L. P.: Improved Pediatric Excretory Urography, J. Urol. **64**:417-420 (August) 1950.
8. Berg, O. C., and Allen, O. H.: The Use of Carbonated Beverage as an Aid in Pediatric Excretory Urography, **67**:393-396 (March) 1952.
9. Pendergrass, E. P.; Chamberlin, G. W.; Godfrey, E. W., and Burdick, E. N.: Survey of Deaths and Other Unfavorable Sequelae Following the Administration of Contrast Media, Am. J. Roentgenol. **48**:741-762, 1942.
10. Dolan, L. P.: Allergic Death Due to Intravenous Use of Diodrast, J.A.M.A. **114**:138-139 (January) 1940.
11. Simon, S.: Sudden Death Following Intravenous Administration of Contrast Media, J.A.M.A. **138**:127-128 (September) 1948.

Others Say

. . . Today the osteopath is doing what he does . . . because district attorneys were apathetic, and then by sufferance and default. And also because we created the void in which the osteopaths have been encouraged as well as allowed to "practice medicine." We now have two widely separate levels of training and practice. One the quick, relatively easy, and cheap entrance into the healing art. The other, a very tedious, slow, difficult and expensive way. It is a paradox to simultaneously recognize two so greatly different levels.—F. T. H'Doubler, M.D., *Greene County Bulletin.*

. . . But it is rare for one man to possess both the *savoir faire* of dealing with people and the scientific acumen for brilliant diagnosis. Should then the layman be willing to pay two men, or should he seek out the physician who, at his own expense, supplements his personal shortcomings by association with others who can supply the deficiency? It is evident that the general public answers this in favor of the second alternative.—Editorial, *Jackson County Bulletin,* 1913, Quoted by Leo H. Pollock, M.D.

. . . Just as a patient with an inguinal hernia lives in the shadow of incarceration of the hernial content, also a patient with cholelithiasis may at any time develop acute cholecystitis superimposed on the already existing chronic cholecystitis. In fact, a patient having chronic cholecystitis with cholelithiasis is ten times more likely to develop acute cholecystitis than an individual having a normal gallbladder. Therefore the presence of gallstones in the gallbladder is an absolute indication for cholecystectomy.—Bela Halpert, Editorial in *Surgery.*

. . . There seems little reason to condemn a minority group because there are a few within the organization that are untrue to their oath of service to man. The profession is trusted by the military forces, by the people of the nation, and warm relations exist in every community between the profession and the people it serves. . . . The profession is an honorable body and stands on a par with any organization including any group of ministers, priests or rabbis. There are in any group those who will stoop to 'most any level and I exclude none. Medicine needs no defense. Their daily efforts exemplify their objectives and desires. Those who from the towers of seclusion, who in many instances contribute part of their service to the financial gain of their institution, or their department, are in no position to criticize the general practitioners who live in no sheltered environment.—Claude J. Hunt, M.D., in the *Jackson County Medical Society Bulletin.*

. . . Blue Cross was our answer to the social planners of the '30's. Now they who wish to rule say voluntary health insurance is all right in its place, but that it is not taking care of long term catastrophic illness. The government is going to do this. That is what Magnuson says. So does Walter Reuther and our ex-whipping boy Oscar Ewing. This sounds logical to a lot of people. Dr. Miller (R-Nebr.) agreed that this might be necessary.

Do we have an answer to this in the '50's as we answered them in the '30's? If we haven't they are going to get a start, and when bureaucracy gets its foot in the door—well, that's all brother, that's all.—G. Wilse Robinson, Jr., M.D., *Jackson County Medical Society Bulletin.*

THE USE OF HYDROCORTISONE (COMPOUND F) BY LOCAL INJECTION IN ARTHRITIS AND ALLIED CONDITIONS*

R. H. RAMSEY, M.D.
ST. LOUIS
AND
J. ALBERT KEY, M.D.
ST. LOUIS

THE ANTIRHEUMATIC activity of cortisone given systemically led to its trial by local instillation in active joints of rheumatoid arthritis. Freyberg et al[1] showed that intra-articular cortisone was effective in improving the synovial fluid changes in rheumatoid arthritic joints with effusion, but found the clinical effect to be minimal and transient.

According to Hollander et al,[2] seventeen-hydroxycorticosterone, or Compound F, was first used intra-articularly by G. W. Thorn early in 1950. Since then several reports describing the results of the use of this adrenal cortex steroid injected locally into and around joints affected by various types of arthritis and in other pathologic states have been published. Hollander et al[2] were the first to report a sizable series of patients demonstrating the value of local hydrocortisone in the clinical management of arthritis. They found that the local injection of this agent was beneficial in rheumatoid arthritis, hypertrophic arthritis, acute gout, acute traumatic arthritis and disseminated lupus erythematosis. In a recent report by Hollander[3] their series was extended and their experience with more than 7,000 injections in more than 2,000 patients was summarized. They found hydrocortisone is only one seventh as soluble as cortisone in plasma and suggested that this might explain the increased efficacy of intra-articular hydrocortisone as compared with intra-articular cortisone. Ziff et al[4] reported that when the material was injected locally there was a much more beneficial response in acute rheumatoid arthritic joints with hydrocortisone than with cortisone. This included both the clinical response and the changes in the synovial fluid (their experience was with ten patients). Stephenson et al,[5] Berry and Benson,[6] Orbach,[7] Ensign and Sigler,[8] and Freund[9] report satisfactory clinical responses with the local use of hydrocortisone in rheumatoid arthritis, hypertrophic arthritis, bursitis and acute gout.

Impressed with early favorable reports on the local injection of hydrocortisone into arthritic joints, our group began using this method in 1952 in a selected group of patients and our experience has now been extended to a point where we feel that we are justified in publishing our observations.

In this paper we are reporting the results obtained in a series of 119 patients who received a total of 218 injections. These are patients who have not received adrenal steroids by other routes and in whom the period of observation has been sufficient to permit a satisfactory evaluation of the clinical response to the treatment. This will be discussed according to the pathologic condition and include hypertrophic arthritis, rheumatoid arthritis, acute and chronic bursitis and a small miscellaneous group. What we consider a favorable response to the injection which would justify the use of this drug in a given patient varies with different disease conditions so that the term "satisfactory response" will be defined separately for each major group.

The injections were performed under aseptic technic and 1 per cent procaine was injected into the skin and along the path of the needle, but not into the joint if this could be avoided. The hydrocortisone was then injected with another needle and syringe. We observed no ill effects from the use of the procaine and the patient had less pain and the surgeon less difficulty in placing the material in the desired location.

Hypertrophic Arthritis.—A total of 100 injections were made into fifty-seven joints in fifty-one patients with hypertrophic arthritis. Of the fifty-seven joints, thirty-nine were knees, fourteen were hips, two were carpo-first metacarpal joints and one each shoulder and acromio-clavicular joints. The response was considered satisfactory if the patient was subjectively relieved of symptoms by at least 50 per cent for a minimum of one week. Using this criterion, forty-eight of the fifty-seven joints showed a satisfactory response and nine were failures. Many of these joints showed a response far better than the criterion given and in many instances the patients experienced a nearly complete relief of symptoms in the joint of from three to ten weeks or longer. As the symptoms are presumed often to be due to the mechanical irritation caused by the joint incongruity, it is not to be anticipated that injection of any antirheumatic agent will be curative. However, as intra-articular injection by proper technic is sufficiently simple, causes the patient little inconvenience and is frequently followed by dramatic relief, we feel that the use of this new therapeutic agent in the management of these patients is a valuable addition. We believe that the clinical improvement is due to a lessening of the inflammation in the joint.

The knee joint is most commonly the cause of pain and disability in this type of arthritis and, fortunately, is the easiest to inject because of the large joint space. Thirty-four of thirty-nine knees gave a satisfactory response and the majority of patients in whom the symptoms recurred gladly submitted to a repeated injection after the effects of the previous injection wore off. As a rule, 1 cc. (25 mgs.) of the drug was injected and other dosages were not used sufficiently often to give an indication of what the optimum dosage should be. The injection was done as an office procedure and

We are indebted to Merck & Co. for the Hydrocortisone used in these studies.
* From the Department of Surgery, Washington University School of Medicine, St. Louis.

caused no difficulty *per se*. Several patients with quite disabling symptoms have been carried along in a greatly improved condition with injections at intervals of from six to eight weeks. The injections have not been given at regular intervals but have been repeated only when the symptoms have definitely recurred and have reached a degree of severity approximating that present before the injection.

Eleven of fourteen hypertrophic hips gave a satisfactory response. This is a higher percentage than reported by Hollander; he felt that the lesser response to injection in the hip compared to the knee was due primarily to the difficulty in getting the medication into the hip joint proper. We have used a 20 gauge spinal needle with an anterolateral approach and injected 2 cc. of the suspension. There is no reason to suspect that the hip would respond to a less extent than the knee if the medication is deposited in the joint.

Smaller joints are injected with from 5 to 10 mgs. and have given good results. The small joints included in this report are two carpo-metacarpal and one acromio-clavicular. We have injected a few chronically painful interphalangeal joints and the results are satisfactory, but these are not included in this series.

Rheumatoid Arthritis.—The favorable response of actively involved rheumatoid arthritic joints to intra-articular injections of hydrocortisone is almost always demonstrable, but is of shorter duration than with hypertrophic arthritis. Subjective improvement of 50 per cent and objective improvement manifested by decrease in heat and swelling lasting for at least four days was considered a satisfactory response. Such a response was found in twenty out of twenty-two joints in fourteen patients with a total of thirty-four injections. As the treatment is noncurative and gives results of short duration, its use is not recommended routinely and should always be given adjunctively with other established forms of management of rheumatoid arthritis. This form of treatment is of particular value in managing patients with monarticular or diarticular involvement and in joints that are having deformities corrected by means of traction, wedging casts or surgery. The dosage is the same as with hypertrophic arthritis, with 25 to 50 mgs. in major joints and 5 to 20 mgs. in smaller joints. When an effusion is present, this is aspirated prior to introducing the hydrocortisone and there appears to be a strong inhibition against reformation of fluid after the injection. The diminution in the heat of the involved joint is often striking within a few hours. Routine studies of the synovial fluid composition have not been carried out by us. Berry and Benson[6] found this treatment of particular value in controlling the pain of acutely involved joints in Army personnel for limited periods during transportation over long distances.

Bursitis.—A total of fifty-two injections into painful bursae in thirty-three patients was performed with curative effect in seventeen, partial relief in nine and no benefit in seven. In twelve patients with acute calcific bursitis of the shoulder, injected with 1 cc. into the calcium deposit, ten were completely relieved of symptoms with one or two injections and two were only partially relieved. Most of these had some alleviation of symptoms in a few hours and complete relief in from three to five days. This response is much better than would be expected with either x-ray therapy or other forms of injection therapy. It is probable that surgical excision of the calcium deposit will be necessary in fewer patients as a result of this simpler form of treatment.

In fifteen patients with chronic bursitis of the shoulder, with or without calcium deposits, only two were completely relieved, six were partially relieved and seven had no significant relief. It is likely that in chronic cases, the deltoid bursa is partially or totally obliterated, making it more difficult to inject the suspension in the irritated area.

The patients with chronic bursitis usually fall into the group described as "frozen shoulder" and in these the active and passive movements of the joint are markedly restricted, the muscles of the shoulder girdle and the bones are atrophic and the pain is often severe and disabling. In some of these the hand may be swollen and stiff (shoulder-hand syndrome). We usually treat this group of patients by manipulation of the shoulder under general anesthesia and, after the adhesions have been broken up, we inject 25 mgs. of hydrocortisone into the bursa and also into the gleno-humeral joint. If the hand is involved, we block the stellate ganglion on the affected side with procaine. We believe that the hydrocortisone makes the postoperative course less painful and the cure more prompt and certain.

Four prepatellar, two olecranon and one biceps femoris bursae, all of which were distended with fluid, were relieved completely by a single aspiration followed by injection of hydrocortisone into the sac. One of the olecranon bursae had been continuously effused for six months and had failed to be relieved by previous aspiration; with aspiration and instillation of 12.5 mgs. of hydrocortisone, there was no further formation of fluid in the five months following.

Miscellaneous Group.—Six patients were treated under the diagnosis of "tennis elbow." These patients had painful conditions in the region of the radio-humeral joint and normal x-rays. Injection of 25 mgs. of the drug into the most painful spot as located by palpation was done and three patients were completely relieved in a few hours with a single injection, two were only partially relieved by two injections at an interval of one week and one failed to respond to four injections.

Somewhat similar to this condition is that of painful heels with or without spurs on the os calcis. In this condition we have injected hydrocortisone into the painful area and this has been

followed by lessening of the pain or cure. Such patients are not included in this series.

Four patients with acutely inflammed (not infected) bunions were treated with injection of 12.5 mgs. into the bursa overlying the bunion and 12.5 mgs. into the metatarsal phalangeal joint. All patients obtained prompt relief of pain which lasted from one to six months.

Four patients with more than the usual degree of hemarthrosis of the knee following menisectomy were treated by aspiration and instillation of 25 mgs. of hydrocortisone. Although the response is difficult to evaluate, it appeared that the recovery was faster than with aspiration alone. In some operated joints, especially arthritic knees, we have instilled hydrocortisone into the joint immediately after the wound was closed and it is our impression that the postoperative course in these patients was less painful, and the restoration of function more easily accomplished than after similar operations where the hydrocortisone was not used. One patient with a month old, painful hematoma of the thigh and showing early myositis ossificans was treated with injection of 25 mgs. after aspiration of the hematoma fluid with prompt, complete and permanent relief of pain and disability.

One patient with persistant pain in the elbow of three months duration following a nondisplaced fracture of the head of the radius was completely relieved following two injections of 12.5 mgs. into the elbow joint at an interval of one week.

Two patients with acutely painful calcium deposits in joint capsules, one wrist and one elbow, were completely and promptly relieved by single injections. One patient with a large Baker's cyst of the popliteal region was treated by aspiration and instillation of 25 mgs.; the fluid promptly reformed and further injection was not done, and the cyst was excised with a satisfactory result.

Complications.—There were no serious complications in this series. No sepsis was encountered but the possibility of producing a septic arthritis by contamination should be constantly kept in mind and meticulous injection technic used. Temporary "faintness" immediately following the injection was seen in a few patients, but this should not be attributed to the drug but rather the procedure of injection. About 5 per cent of patients reported an increase in pain in the injected joint for from one to three hours following the injection before improvement began to be noticed. This is probably the result of injection trauma rather than a reaction to the drug. One patient with moderately severe degenerative arthritis of the knee had increased pain for three days following injection but without evidence of infection, and this may indicate an abnormal sensitivity to the drug, but we believe that in this patient the symptoms were functional in origin.

One patient, not in this series was seen in consultation who had had approximately ten injections of 37½ mgs. into a painful osteo-arthritic knee at intervals of seven to ten days; she had responded well until the last injection and then developed an acutely painful, hot, swollen joint which yielded over 100 cc. of thick yellowish green fluid, negative on culture, and a few days later developed a similar condition in the other knee which had never been injected. This cannot be adequately explained but may represent a reaction to overdosage of a joint with hydrocortisone. We believe that the injection should not be repeated as long as the patient is maintaining a satisfactory response to a previous injection.

We have used the method of intra-articular injection only in selected cases with relatively severe symptoms because we feel that a needle should not be inserted into a joint without reason of sufficient gravity to warrant the procedure. Also, one of us (Key[10]) has shown that repeated injections of blood or even of normal salt solution may produce arthritic changes in a joint. We have also largely refrained from injecting small joints because of the trauma incident to the injections.

SUMMARY AND CONCLUSIONS

Experience with 119 patients with a variety of common orthopedic conditions treated with intra-articular and juxta-articular injection of hydrocortisone suspension is reported. We have found that the procedure is useful in treating acute exacerbations of the major joints, especially of the knee, in hypertrophic arthritis, and in acute sub-deltoid bursitis, especially where there is a calcium deposit in the bursa.

While it is not a panacea and does not relieve every case, it is sufficiently useful to be recommended for more general use. It is a valuable therapeutic agent not only for the treatment of acutely painful arthritic joints but also for its local anti-inflammatory action in several other painful conditions in which the etiology is obscure.

4952 Maryland Ave.

BIBLIOGRAPHY

1. Freyberg, Patterson, Adams, Durivage and Traeger: Practical Considerations of the Use of Cortisone and ACTH in Rheumatod Arthritis, Ann. Rheumatic Dis. **10**:1, 1951.
2. Hollander, Brown, Jessar and Brown: Hydrocortisone and Cortisone Injected Into Arthritic Joints.—Comparative Effects of the Hydrocortisone and the Use as a Local Anti-Arthritic Agent, J.A.M.A. **147**:1629, 1951.
3. Hollander, J. L.: Intra-articular Hydrocortisone in Arthritis and Allied Conditions.—A Summary of Two Years Clinical Experience. Presented at the American Academy of Orthopedic Surgeons Meeting, Chicago, Ill., January 1953.
4. Ziff, Scull, Ford, McEwen and Bunim: Effects in Rheumatoid Arthritis of Hydrocortisone and Cortisone Injected Intra-articularly, Arch. Int. Med. **90**:774 (December) 1952.
5. Stevenson, Zuchner and Freyberg: Intra-articular Hydrocortisone (Compound F) Acetate, Ann. Rheumatic Dis. **11**:112 (June) 1952.
6. Berry and Benson: Hydrocortisone in Rheumatoid Arthritis. United States A. F. M. J. **4**:99 (January) 1953.
7. Orbach, E. J.: Treatment of Bursitis by Local Injection of Hydrocortisone Acetate, J. Internat. Col. Surg. **18**:159 (August) 1952.
8. Ensign, D. C., and Sigler, J. W.: Intra-articular Hydrocortisone in the Treatment of Arthritis—Present Status, J. Michigan M. S. **51**:1189 (September) 1952.
9. Fruend, H. A.: The Intra-articular Injection of Hydrocortisone in the Treatment of Selected Cases of Arthritic Diseases, J. Michigan M. S. **51**:1199 (September) 1952.
10. Key, J. Albert: Experimental Arthritis—the Reactions of Joints to Mild Irritants, J. Bone & Joint Surg. **11**:705 (October) 1929.

Postgraduate Review

TRICHLORETHYLENE ANALGESIA AND ANESTHESIA IN OBSTETRICS AND MINOR SURGERY

SEYMOUR BROWN, M.D.
ST. LOUIS
AND
BERNARD F. FEHLMAN, M.D.
ST. LOUIS

TRICHLORETHYLENE WAS described first in 1864 and has been used for many years as a solvent and nonflammable cleaner in industry. In 1915 Plessner[1] reported symptoms of poisoning in workers using the commercial preparation and noted the special affinity of this chemical for the sensory fibers of the trigeminal nerve. Oppenheimer[2] suggested its use by inhalation in the treatment of trigeminal neuralgia. Jackson[3] in 1934 described the use of trichlorethylene for general analgesia and anesthesia. In the same issue of the journal Herzberg[4] published a report of a study on the histology of tissues from dogs killed by prolonged administrations of high concentrations of trichlorethylene vapor, indicating no significant changes. In 1935 Striker et al[5] reported its clinical use to produce analgesia and anesthesia in more than 300 cases noting particularly the absence of postoperative nausea, vomiting and depression. Enough interest was stimulated to have the Council on Pharmacy and Chemistry of the American Medical Association publish a preliminary report[6] in 1936 delaying acceptance of the substance as a general anesthetic and advocating further study of its properties and investigation of its potential toxicity due to decomposition products.

Following the Council's report, interest in trichlorethylene as an anesthetic or analgesia agent was not revived until Hewer[7, 8] in Great Britain reported favorably on its clinical use in 526 cases during 1941 and 1942. Many men in Britain and Canada began its use in major and minor surgery and obstetrics with varied success, gradually reaching the conclusion during the last ten years that its safety lies within the realm of analgesia and minor surgery with strictly observed technics.

In 1943[9] and 1944[10] Waters, Orth and Gillespie in this country reported electrocardiographic studies on dogs and clinical patients under carefully controlled trichlorethylene anesthesia with accepted technics and concluded that it produced undesirable effects on cardiac rhythm. In 1943 Gordon and Shakleton[11] in Britain also reported this complication in a high percentage of clinical cases. Again, interest in this country waned until the last couple of years, although European countries and Canada have continued to use it with varied impressions.[12, 13, 14, 15]

CHEMISTRY

Trichlorethylene is an unsaturated chlorine substituted derivative of ethylene. The specific gravity of the liquid is 1.47 and of the vapor 4.53 and the boiling point is 86 to 88 C. It is nonflammable under ordinary conditions but will unite in pure oxygen at 419 C. It is a clear, colorless liquid with a sweet not unpleasant odor.

Chemically pure trichlorethylene is slightly unstable when exposed to sunlight and air with formation of small quantities of carbon monoxide, phosgene ($COCl_2$) and hydrochloric acid. Thymol retards this reaction. It is practically insoluble in water but soluble in oils, having a high oil-water ratio. It is stable in the presence of soda lime at a temperature below 15 C., but above this temperature decomposes with the formation of toxic flammable chloracetylenes—in particular, dichloracetylene.

The commercial grade of trichlorethylene used in industry contains impurities rendering it unsuitable for anesthetic uses. A specially purified trichlorethylene preparation, stabilized by the addition of 0.01 per cent thymol and colored with waxoline blue dye is marketed for anesthetic purposes under the trade name "trilene."

PHARMACOLOGY

From 6 to 16 per cent of trichlorethylene inhaled is oxidized and excreted by humans and animals as trichloracetic acid in the urine and feces, but it apparently is not the active ingredient.[16] Excretion occurs in from two to four hours after administration and continues for from four to twenty days. It is believed to have no toxic effect on humans in concentrations found. Animal experiments of Herzberg[4] and Striker[5] et al show no disturbance of blood chemistry or liver and kidney function. In this regard Freedman,[15] using an air-trilene inhaler reported no clinical complications even in patients with pre-eclamptic toxemias. The most frequent complications deal with the cardiovascular system. Blood pressure shows little change and several authors note that capillary oozing appears less than with ether.[17, 18, 19] Bradycardia is the most frequently observed effect on heart rhythm but various irregularities and frequency of irregularities have been reported.[8, 10, 11, 20] Some of these authors were using technics of closed circle absorption with wick vaporizer or gas bubbling through the liquid, producing dichloracetylene in the closed system and excessive concentration. Others[21, 22] used correct technics but found that increasing depth of anesthesia beyond analgesic stages produced cardiac irregularities.

Presented at the St. Louis Medical Society, March 17, 1953.
(S. B.) Director of Anesthesiology, St. John's Hospital, St. Louis; Assistant Professor of Anesthesiology, St. Louis University School of Medicine, St. Louis.
(B. F. F.) Resident in Anesthesiology, St. John's Hospital, St. Louis.

Gain et al[17] believe that vagal overactivity seems to explain best the cardiac irregularities—specifically bradycardia, although Johnstone[20] believes these are due to carbon dioxide retention. Extrasystoles arise due to increased vagal tone depressing the inherent rhythmicity of the sinoatrial node to such an extent that cardiac contraction occurs in another focus before initiation by the node. Most of the cardiac irregularities are evanescent.[15, 17, 23] Epinephrine should not be used in conjunction with trichlorethylene as it increases myocardial irritability and may lead to serious cardiac arrhythmias.[9]

Aberrations in the respiratory rhythm are the next most common change. Frequent tachypneas are reported by many authors[14, 17, 20, 24] but it is almost always temporary and is usually relieved with reduction of the depth of anesthesia. Whitteridge et al[25] believe this is due to enhanced vagal activity stimulating the Hering Breuer reflex which limits inspiration, leading to decreased tidal volume and possible hypercapnia and hypoxia. Respiratory arrests have resulted without previous tachypneas[3, 5, 10] but have responded to artificial respiration with oxygen.

Occurrence of cranial palsies, herpetic lesions and even death were demonstrated by McClelland and Humphrey[26] and Carden[27] to occur as a result of inhalation of degradation products of trichlorethylene produced by contact of trilene with hot soda lime in a closed system. Generally the incidence of postoperative vomiting or nausea is considered minimal in comparison with other agents unless used in major surgery or with soda lime absorption. Convulsions have also been reported in the literature.[28, 29]

Helliwell and Hutton[30] reported that trichlorethylene passed the placental barrier without deleterious effect on fetal activity in animals. Also it had little effect on uterine activity. These latter conclusions are confirmed by many authors in clinical work,[15, 17, 23] but Rawlings[31] in February 1953 reports that six cases in 400 had definite uterine depression.

It is axiomatic that obstetric analgesia and anesthesia involves the safety of two individuals in each situation in which beneficial agents for the mother may be detrimental to the unborn child. Drugs used to relieve the mother's pain may depress the responses of the infant so as to delay onset of spontaneous respiration, especially when obstetric trauma has been added to the depression. Innocuous, pleasant agents which would permit complete relief of pain for the mother throughout labor, preserve her cooperation and the whole reflex mechanism of "bearing down" in the second stage, preserve uterine tone and uterine contractibility, without depressant effect on the fetus, would be ideal. Also an agent producing minimal nausea or vomiting would be tremendously influential in decreasing the incidence of aspiration, an important cause of maternal morbidity and mortality.

In the last two years favorable reports on trilene air and trilene-nitrous oxide mixtures by Gain et al[17] and Gordon and Morton[23] in Canada have been published with special reference to obstetric anesthesia. Numerous favorable critical reports have been present in British and Scandinavian journals for the last ten to twelve years.[12, 13, 14, 15, 20, 31, 32] These publications convey the impressions of safe, pleasant anesthesia for the mother with good cooperation, comparatively low incidence of nausea and vomiting, rapid recovery, low incidence of fetal depression, high oxygen concentration, reduced instrumentation and no maternal mortality. The limitations of trilene are its inability to produce relaxation and its usefulness only in the light of analgesic stage of anesthesia. Increased concentrations give a high incidence of cardiac and respiratory arrhythmias with a possible fatal arrest. The incidence of cardiac and respiratory arrhythmias in comparatively light planes of anesthesia varies with the authors but it appears to be harmless and evanescent in those stages. However some patients do not attain proper levels of analgesia and become activated.[5, 17, 31, 33]

The proposed unique quality of trilene is its potentiality of producing a profound and prolonged analgesia without loss of consciousness. It is a good supplement for 65:35 nitrous oxide-oxygen mixture giving a more quiet and relaxed patient. It must be used in high flow technics (6 to 8 liters) without rebreathing or soda lime absorption, and without wick vaporization or gas bubbling through the liquid. It may also be used in an inhaler with air or added oxygen to the vaporizing gas. Over a period of several hours during labor it produces a prolonged drowsiness even though administered intermittently by the patient in an inhaler.[15, 31]

The patients treated in obstetrics in this series are classified in two groups: Group I—usual sedation during labor with trilene air analgesia with an inhaler for delivery; Group II—usual sedation during delivery with trilene-nitrous-oxide analgesia for delivery.

The incidence of parity in the fifty-two obstetric patients is tabulated in table 1.

TABLE 1. *Type of Obstetrical Patients*

	Total	Primipara	Multipara
Inhaler	17	6	11
Nitrous-Oxide Trilene	35	11	24

Four of the primiparous patients and one multiparous patient moved slightly during the episiotomy and suturing of the episiotomy, but none remembered any pain postpartum. Most of the patients could follow instructions to "bear down" during the delivery. (See table 2.)

Four primipara and three multipara were slightly stimulated during the repair of the episiotomy, but none had any remembrance of pain.

Immediately after the second stage of delivery the trilene was discontinued and the episiotomy repair was performed under nitrous-oxide-oxygen

TABLE 2. *Duke Inhaler. Obstetrical Procedures and Reactions*

	Total	Episiotomy	Forceps	Decreased Uterine Tone	Age
Primipara	6	6	6	0	19-25
Multipara	11	4	2	0	21-36

unless the patient was stimulated excessively. Then a small amount would be added intermittently. Trichlorethylene has a residual analgesic effect lasting from ten to fifteen minutes. Most of the patients could cooperate in "bearing down." (See table 3.)

TABLE 3. *Nitrous-Oxide Oxygen Trichlorethylene* Obstetrical Procedures and Reactions

	Total	Episiotomy	Forceps	Decreased Uterine Tone	Age
Primipara	11	11	11	0	17-38
Multipara	24	14	14	0	20-37

Two cases in the inhaler series and eight cases in the nitrous-oxide-oxygen trilene series had minimal vomiting immediately postpartum when all analgesics were discontinued. However, all patients had return of their reflex activity and were not in danger of aspiration. None of the patients in either series vomited during anesthesia. Three patients in the inhaler series and two in the nitrous-oxide-oxygen trilene series had some minimal nausea and vomiting for two to three hours postpartum. All patients thought the substance was pleasant and the multipara were especially pleased in comparison with previous experiences with ether. (See table 4.)

TABLE 4. *Maternal Anesthetic Reactions*

	Inhaler (17)	N_2O-O_2 Trichlorethylene (35)
Vo I PP	2	8
Vo PP	3	2
Excitement	3	0
Inadequate Analg.	5	2
Laryngospasm	2	0
No N or V	11	27
Recov.— 5 min.	15	31
20 min.	2	4

Five patients in the inhaler series had inadequate relaxation and analgesia and required supplementary ether. Four patients were primipara and one was a multipara. However all had an amnesia for the events. Only two of the primipara were nauseated or vomited. In the nitrous-oxide-oxygen trilene series two primipara patients had inadequate analgesia and relaxation requiring ether supplementation.

Fifteen of the inhaler series were awake and cooperative within five minutes, but two required approximately twenty minutes. Thirty-one of the gas trilene series were awake within five minutes and the other four within twenty minutes.

Two patients in the inhaler series had an evanescent laryngospasm which was not serious.

Cardiorespiratory effects such as tachypneas, bradycardias, tachycardias and arrhythmias were not considered as most authors agree that there is tremendous variability during the course of normal labor.

Spontaneous respiration is interpreted as being less than two minutes delay. One baby in the inhaler series required vigorous oral suction, some back rubbing and oxygen administration over a period of five minutes before respiration was adequate. Two babies in the gas trilene series required this treatment although one of the patients had received no premedication. The other patient had received 100 milligrams demerol within 45 minutes previous to the birth of the baby. No babies required artificial respiration and all had an uneventful course postpartum. (See table 5.)

TABLE 5. *Fetal Anesthetic Reactions*

	Inhaler (17)	N_2O-O_2 Trichlorethylene (35)
Immed. Resp.	9	28
Spont. Resp.	7	5
Resusc.	1	2
Stillborn	0	0
Neonatal Death	0	0

In the field of minor surgery the aforementioned characteristics of trichlorethylene make it especially adaptable. The properties of easy pleasant induction with good controllability, nonflammability, quick recovery with a low incidence of nausea or vomiting, quiet patient and no effects on physiology in the light planes of anesthesia would make it ideal if true. Bernstine,[34] Offenbach[18] and Pickrell et al[19] have recently published enthusiastic reports concerning various types of minor surgery in which trilene in an inhaler, dropped on gauze, and with nitrous-oxide-oxygen supplement were used. The last group of authors were especially impressed with the nonirritating quality and decrease in capillary oozing in addition to the previously named characteristics.

Our report deals with a group of minor surgical procedures using the "Duke" inhaler manufactured recently in this country and nitrous-oxide trilene mixtures. The British manufacturers have developed several inhalers, "Cyprane," "Steele," and "Tecota," for use primarily in minor surgery and obstetrics. All inhalers basically consist of a vaporizer through which air is drawn by the patient's respiration, an expiratory check valve and blow-off valve, and a by-pass for adjusting the amount of air passing through the trilene chamber. The "Duke" inhaler also has a small nipple for possible supplementation with oxygen. All inhalers have a key device to set the concentration and prevent its being changed. The

"Duke" inhaler delivers under ideal conditions 1.3 per cent trilene vapor concentration on maximum setting with 0.5 to 0.6 per cent at setting of two to three notches. The latter is the contemplated ideal concentration although it is occasionally insufficient. However, with higher concentration the incidence of cardiorespiratory abberations and excitement is increased.

The nitrous-oxide-oxygen mixtures were given without carbon dioxide absorption in 50:50 to 65:35 mixtures in high flow (6 to 9 liters per minute) circle semiopen rebreathing system. The obstetric series used no rebreathing. The trilene was placed in the ether bottle container with the level of fluid just covering the bottom of the wick vaporizer. The vaporizer bottle was never opened more than the notch corresponding to thirty drops per minute. Although it is believed that trilene is not sufficiently volatile for open drop methods because of its high boiling point, it is too potent and toxic in high concentrations to use the usual wick vaporizer or bubbling technic. Enderby[21] emphasizes that trilene is only an analgesic and should not be used to obtain anesthesia stages which require relaxation.

These patients varied in age from 2 to 65 years and the length of anesthesia from 3 to 20 minutes. (See table 6.)

TABLE 6. *Trichlorethylene Inhaler*

Operations (21)	
Burn debridement and dressing	4
Fractures, long bones	3
Back manipulations	2
Shoulder manipulations	2
Cystoscopies	1
Incis. and drain, abscesses	4
Vein strippings	3
Excise Vulvar Adhesions	1
Remove intraclavicular pin	1

These patients varied in age from 9 to 79 years and the length of anesthesia from 5 minutes to 4 hours. In orthopedic surgery were included such operations as open reductions in hip fractures, hip arthroplasties, removal of bone plates and hip nails, and excision head of radius and excision of bursae. General surgical procedures involved radical mastectomies, radical neck resections, vein strippings, suture lacerated tendons, removal simple tumors of breast and surface areas and removal of wrist ganglia. Plastic surgery included removal of tumors with skin grafting, burn dressings, debridement and skin grafting and Dupuytren's contractures. Gynecologic procedures were perineal and vaginal, and the genitourinary operations involved only the external genitalia. One simple thoracotomy and one ulnar nerve transplant were also performed. (See table 7.)

Since pentothal sodium was used as the inducing agent all of the gas trilene series had a pleasant induction. In the inhaler series two of the patients undergoing vein strippings disliked the odor and resented the mask. The ten patients in the gas pentothal series requiring longer than twenty minutes to recover consciousness to the point of responding to spoken voice included operations for bilateral vein stripping, extensive skin grafting and an open reduction of a hip fracture. The length of operations were between two to four hours. However all had good reflex tone, resented airways, and presented no problems in respiratory obstruction. (See table 8.)

TABLE 7. *Pentothal Sodium-N_2O-O_2-Trichlorethylene*

Operations (97)	
Orthopedic Surgery	17
Plastic Surgery	26
Gynecologic Surgery	1
General Surgery	41
Genitourinary Surgery	6
Thoracic Surgery	1
Neurologic Surgery	1

In the inhaler series a 2 year old child with vulvar adhesions and a patient with a Colles fracture vomited immediately after anesthesia. One of the vein stripping patients was nauseated. In the pentothal sodium nitrous oxide trilene series vomiting occurred seven times in ninety-seven procedures. There was no relation between the severity and length of the procedures and it was almost always of brief duration. Also ten patients noted slight nausea. It is interesting to note that most patients who reported nausea or vomiting soon after morning operation were able to eat their evening meal and all were fine the next day. A high percentage of the patients appeared quite well soon after operation with minimal variations in pulse and blood pressure.

TABLE 8. *Trichlorethylene Effects*

	Inhaler (21)	Pentothal Sodium-Nitrous Oxide Trichlorethylene (97)
Pleasant	19	97
Recovery 5-20 min.	21	87
20 min.	0	10
No N or V	18	80
Nausea	1	10
Vomiting	2	7
Excitement	4	0
Tachypnea	3	16
Bradycardia	1	6
Arrhythmia	0	1
Adequate Analg.	13	95
Inadequate Analg.	8	2
Poor relaxation	6	1
B. P. Changes	2	17

Two patients undergoing operations for vein strippings and two for burn dressings, respectively, became quite activated and excited in the inhaler series.

Tachypnea was noted not infrequently: sixteen cases in the gas series and three cases in the inhaler series. As it usually did not occur in the gas series until approximately thirty minutes had elapsed, it may be a factor of carbon dioxide accumulation. However, it was sometimes reduced by decreasing the concentration of trichlorethylene.

Bradycardia ranging between fifty-four to sixty-six beats per minute occurred in the older age group. One patient, 77 years old, undergoing an open reduction of the hip, had an evanescent clinically apparent irregular irregularity of pulse which disappeared on decreasing the concentration of trilene. Seventeen patients in the gas inhalation series showed definite blood pressure variations which appeared to be a function of the depth of anesthesia, falling as the depth was increased.

A 44 year old woman undergoing a radical mastectomy operation was difficult to keep anesthetized without using an inordinate supplemental amount of pentothal sodium. A closed reduction of a shoulder dislocation could not be performed well. In the inhaler series adequate analgesia could not be obtained in the four burn dressings with debridement, two long bone fractures and two sacro-iliac manipulations.

As the hip cases were done with prolonged traction on the fracture table, and the other operations were surface procedures, relaxation was not a factor in the sodium pentothal nitrous oxide trilene series. However, inadequate relaxation was obtained in two of the long bone fractures, two shoulder manipulations and the two sacro-iliac manipulations. (See table 8.)

DISCUSSION

Our limited experience with trilene analgesia in obstetrics and surgery has been generally favorable. Enough experience has already accumulated in the literature to evaluate the hazards and complications of improper administration technic and cognizance of its potency and toxicity. It has definite deleterious effects on the cardiorespiratory system when used in intracranial, intrathoracic or intra-abdominal operations as the maintenance agent. Delayed recovery from anesthesia, prolonged nausea and vomiting and various neurologic complications may occur.

The trilene inhalers appear to be satisfactory for minor surgical procedures and for pain relief during the first stage of labor but have not been ideal for analgesia during the second stage. Due to the high analgesic potency without loss of consciousness the nitrous oxide-oxygen-trilene mixture gives better analgesia and control during the second and third stages of labor with minimum nausea and vomiting. There appears to be little or no depressive effect upon fetal respiration or circulation. However relaxation is still inadequate in some primipara and for versions, requiring the addition of ether or some other potent agent.

We have not found the inhaler adequate for analgesia of early burn dressings and debridement. Patients complain severely and become activated. The inhaler provides little relaxation in muscular patients for sacro-iliac manipulations and closed reductions in long bone fractures. The trilene-nitrous-oxide-oxygen mixture using the high flow, open semi-rebreathing technic without any soda lime absorption is a definite advance in analgesia for plastic surgery and general surgical procedures requiring minimal relaxation. It is a pleasant nonflammable analgesia from which the patient recovers quickly with minimum nausea and physiologic disturbance. However it should be emphasized that trichlorethylene, even in its purified form, does have deleterious physiologic effects and complications when improperly administered by untrained personnel. The wave of popular publicity depicting it as a completely innocuous effective drug which may be administered by anyone may cause unfortunate complications.

SUMMARY

1. The chemistry, pharmacology and physiologic effects of trichlorethylene are discussed.

2. The proper accepted safe technics of trichlorethylene administration are discussed and explained.

3. Trichlorethylene represents a valuable addition to the armementarium of the anesthesiologist when used with proper knowledge of its potentialities and effects.

7553 Gannon Ave.

BIBLIOGRAPHY

1. Plessner: Neurol. Zentrabl. **34**:916, 1915, quoted by A.M.A. Council Report.
2. Oppenheimer: Neurol. Zentrabl. **34**:918, 1915, quoted by A.M.A. Council Report.
3. Jackson, D. E.: Study of Analgesia and Anesthesia with Special Reference to Such Substances as Trichlorethelylene and Vinethene Together with Apparatus for Their Administration, Anesth. & Analg. **13**:198-203 (Sept.-Oct.) 1934.
4. Herzberg, M.: The Histology of Tissues Taken from Animals Killed by Prolonged Administration of Concentrated Vapors of Trichlorethylene, Anesth. & Analg. **13**:203-204, 1934.
5. Striker, C.; Goldblatt, S.; Warne, I. S., and Jackson, D. E.: Clinical Experiences with the Use of Trichlorethylene on the Production of over 300 Analgesias and Anesthesias, Anesth. & Analg. **14**:68-71, 1935.
6. Preliminary Report of the Council on Pharmacy and Chemistry: The Use of Trichlorethylene for General Anesthesia, J.A.M.A. **107**:1302 (Oct. 17) 1936.
7. Hewer, C. L.: Trichlorethylene as an Inhalation Anesthetic, Brit. M. J. **1**:924 (June) 1941.
8. Hewer, C. L.: Trichlorethylene as a General Inhalation Analgesic and Anesthetic, Proc. Roy. Soc. Med. **35**:463-68 (May) 1942.
9. Waters, R. M.; Orth, O. S., and Gillespie, N. A.: Trichlorethylene Anesthesia and Cardiac Rhythm, Anesthesiology **4**:1-5 (January) 1943.
10. Orth, O. S., and Gillespie, N. A.: A Further Study of Trichlorethylene Anesthesia, Brit. J. Anesth. **19**:151, 1944-45.
11. Gordon, R. A., and Shakleton, R. P. W.: Trichlorethylene Anesthesia in Plastic Surgery, Brit. M. J. **1**:380, 1943.
12. Ayre, P.: Anesthesia for Neurosurgery with Special Reference to Trichlorethylene, Brit. J. Anesth. **19**:17 (January) 1944.
13. Dhuner, K. G.: Cardiac Irregularities Due to Trichlorethylene Given During Labor, Acta Obst. & Gynec., Scandinav. **31**:4,478, 1952.
14. Durrans, S. F.: Delayed Recovery from Trilene Anesthesia, Lancet **2**:191 (August) 1943.
15. Freedman, A.: Trichlorethylene—Air Anesthesia in Childbirth: An Investigation with a Suitable Inhaler, Lancet **2**:696 (December) 1943.
16. Ahlmark, A., and Forssman, S.: The Effect of Trichlorethylene on the Organism, Acta Physiol. Scandinav. **22**:326-29 (June) 1951.
17. Gain, E. A.; Yates, M., and Watts, E. H.: Obstetric Anesthesia Using Nitrous Oxide-Oxygen-Trichlorethylene, Anesth. & Analg. **30**:278:284 (Sept.-Oct.) 1951.
18. Offenbach, B.: Trichlorethylene as an Analgesic in

Ophthalmologic Practice, Am. J. Ophth. 35:250-52 (February) 1952.
19. Pickrell, K. L.; Stephen, C. R.; Broadrent, T. R.; Masters, F. W., and Giorgiade, N. C.: Trichlorethylene Analgesia, Plastic Surg. 9:4,345 (April) 1952.
20. Johnstone, M.: Pethidene and General Anesthesia, Brit. M. J. 2:943 (Oct. 20) 1951.
21. Enderby, G. E. H.: The Use and Abuse of Trichlorethylene, Brit. M. J. 2:300, 1942.
22. Hunter, A. R.: Complications of Trilene Anesthesia, Lancet 2:308, 1944.
23. Gordon, R. H., and Morton, M. V.: Trichlorethylene in Obstetric Analgesia and Anesthesia, Anesthesiology 12:6,680-687 (November) 1951.
24. Goldschmidt, M. W.: Two Complications with Trichlorethylene Anesthesia, Lancet 2:414 (October) 1943.
25. Whitteridge, D., and Bulbring, E.: Changes in Activity of Pulmonary Receptors in Anesthesia and their Influence on Respiratory Behavior, Brit. M. Bull. 4:85-88, 1946.
26. Humphrey, J. H., and McClelland, M.: Cranial Nerve Palsies with Herpes Following General Anesthesias, Brit. M. J. 1:315, 1944.
27. Carden, S.: Hazards in Use of Closed Circuit Technique for Trilene Anesthesia, Brit. M. J. 1:319-320 (Mar. 4) 1944.
28. Garland, Y.: Convulsions Under Trilene Anesthesia, Brit. M. J. 2:607-608, 1942.
29. Stephen, C. R., and Slater, H. M.: Newer Anesthetic Agents in Children with Special Reference to Trichlorethylene and Kemithal, Anesthesiology 12:2, 135-144 (March) 1951.
30. Helliwell, P. J., and Hutton, A. M.: Analgesia in Obstetrics, Anesthesia 4:18, 1949.
31. Rawlings, E. E.: Trichlorethylene in Labour, Brit. M. J. 1:436-38 (Feb. 21) 1953.
32. Browne, O'D.; McCormick, V., and de Burghwhyte, T.: Trichlorethylene Analgesia in Labour; Observations on the Use in the Rotunda Hospital, Brit. M. J. 2:1556-1557 (Dec. 29) 1951.
33. Ward, S. E.: Self Administered Analgesia in Labour with Special Reference to Trichlorethylene, Lancet 2:696-97, 1943.
34. Bernstine, M. L.: A Simple Method of Anesthesia for Minor Surgical Procedures, Am. J. Surg. 84:3,323-325 (September) 1952.

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures "know-how"

ST. LOUIS Office:
Robert M. Childers, Rep.,
7004 A Glenmore,
Tel. Evergreen 2950

Knox Gelatine . . .
useful protein supplement for the growing child

For Body Growth

Protein not only helps feed the machine of the growing child but is itself the machinery. An abundance of protein both for body growth as well as for blood, enzyme and hormone synthesis is a primary requirement in childhood. While carbohydrate and fat may be stored in the organism, protein must be taken in daily to maintain the structural mass of tissue.

Abundant Energy

The daily diet must contain the so-called essential amino acids as first shown by Osborne and Mendel(1) and more precisely defined by Rose.(2) Once the essential amino acids are furnished, the remaining ones may be taken in abundance from other protein sources to insure full growth and create abundant energy.

Easy to Digest

Knox Gelatine is an excellent protein supplement, easy to digest and administer, and non-allergenic. It may be prepared in a variety of ways from Knox Gelatine Drink to delicious salads and desserts.

High Dynamic Action

Gelatine in the form of gelatinized milk has been found a valuable protein supplement helpful in allergies, celiac disease, colic and to increase the digestibility of the milk formula.(3) Its high specific dynamic action(4) which spares essential amino acids and furnishes amino acids for the continuous dynamic exchange of nitrogen in the tissue(5) helps the child to maintain the normal body heat. Furthermore, it contains an abundance of important glycine and proline necessary for hemoglobin formation.

1. Osborne, T. B. and Mendel, L. B., J. Biol. Chem. 17:325, 1914.
2. Rose, W. C., Physiol. Rev. 18:109, 1938.
3. Wolpe, Leon Z. and Silverstone, Paul C., J. Pediat. 21:635, 1942.
4. Lusk, G., J. Nutrition 3:519, 1931. Borsook, H., Biol. Rev. 11:147, 1936.
5. Schoenheimer, R., Ratner, S., and Rittenberg, D., J. Biol. Chem., 127:333, 1939 and 130:703, 1939.

You are invited . . . to send for brochures on diets of Diabetes, Colitis, Peptic Ulcer . . . Low Salt, Reducing, Liquid and Soft Diets.
KNOX GELATINE, JOHNSTOWN, N. Y. DEPT JMS

Available at grocery stores in 4-envelope family size and 32-envelope economy size packages.

KNOX GELATINE U. S. P.
All Protein No Sugar

Case Report

XANTHINE CALCULUS

JOHN FREDERICK MACKEY, JR., M.D.
ST. LOUIS

XANTHINE CALCULUS of the urinary tract is reported infrequently. There have been twenty-four cases noted in the literature.[1]

Opinion has been controversial about opacity of xanthine to x-ray. Taylor,[1] Eisendrath[2] and others state that it is nonopaque or faintly opaque. Kretchmer[3] and Pearlman[4] have demonstrated opaque xanthine.

The following case is reported because the patient was found to have a nonopaque vesical calculus which consisted primarily of xanthine. This was associated with prostatic hyperplasia and vesical diverticula and offered difficulty in diagnosis.

REPORT OF CASE

J. W., a 78 year old white male, entered St. Anthony's Hospital, St. Louis, on November 15, 1950. Ten days prior to admission acute urinary retention occurred. On catheterization about 1,500 cc. of urine was obtained. After trial of intermittent catheterization and the use of antibiotics, the patient was still unable to void. The history revealed progressive diminution in the caliber and force of the urinary stream. There was associated frequency and nocturia for the past year.

Systemic review and physical examination were essentially normal. Rectal examination revealed the prostate to be enlarged about three times. It was normal in consistency and freely movable.

Cystoscopic examination showed an inverted "v" at the bladder neck with elongation of the prostatic urethra. There was intra-urethral protrusion of all three lobes. The bladder appeared heavily trabeculated with cellules and small diverticula. No calculi or neoplasms were in evidence. The ureteral orifices were not visualized.

A plain x-ray film was negative for opaque calculi. Intravenous pyelography revealed no abnormalities.

Laboratory findings.—The urine was acid in reaction. Urinalysis was normal. The blood and blood chemistry were normal. Electrocardiogram revealed left myocardial damage.

One stage suprapubic prostatectomy was performed on November 21, 1950. The pathologic report was benign prostatic hyperplasia. The postoperative course was uneventful.

Five weeks following discharge from the hospital acute urinary retention occurred. Cystoscopy revealed a calculus which was brownish-black in color and about 1 by 0.5 by 0.5 cm. in size. Litholapaxy was recommended but this was refused by the patient. Irrigation with Suby "G" solution and urease was instituted. After about two and a half weeks of this procedure the stone remained unaffected and the patient agreed to litholapaxy.

The calculus was crushed and fragments were evacuated. Chemical analysis of the fragments revealed xanthine to be strongly positive.

Triple phosphates, fibrin and carbonates were moderately positive.

SUMMARY

This is the case report of a patient with a xanthine bladder calculus. The calculus was associated with benign prostatic hyperplasia and vesical diverticula. The calculus was not detected preoperatively by x-ray or cystoscopy, or at surgery for prostatectomy. Five weeks after suprapubic prostatectomy, acute urinary retention occurred. X-ray was negative. Cystoscopy revealed a brownish-black bladder stone. Litholapaxy was performed and analysis of stone fragments disclosed a predominance of xanthine.

994 Arcade Building.

BIBLIOGRAPHY

1. Taylor, W. N., and Taylor, J. N.: Xanthine Calculi, J. Urol. **68**:659 (September) 1952.
2. Eisendrath, D. N., and Rolnick, H. C.: Urology, Philadelphia, 1934.
3. Kretchner, H. L.: J. Urol. **38**:183, 1937.
4. Pearlman, C. K.: J. Urol. **64**:799, 1950.

From the Department of Urology, St. Louis University School of Medicine.

BOOK REVIEW

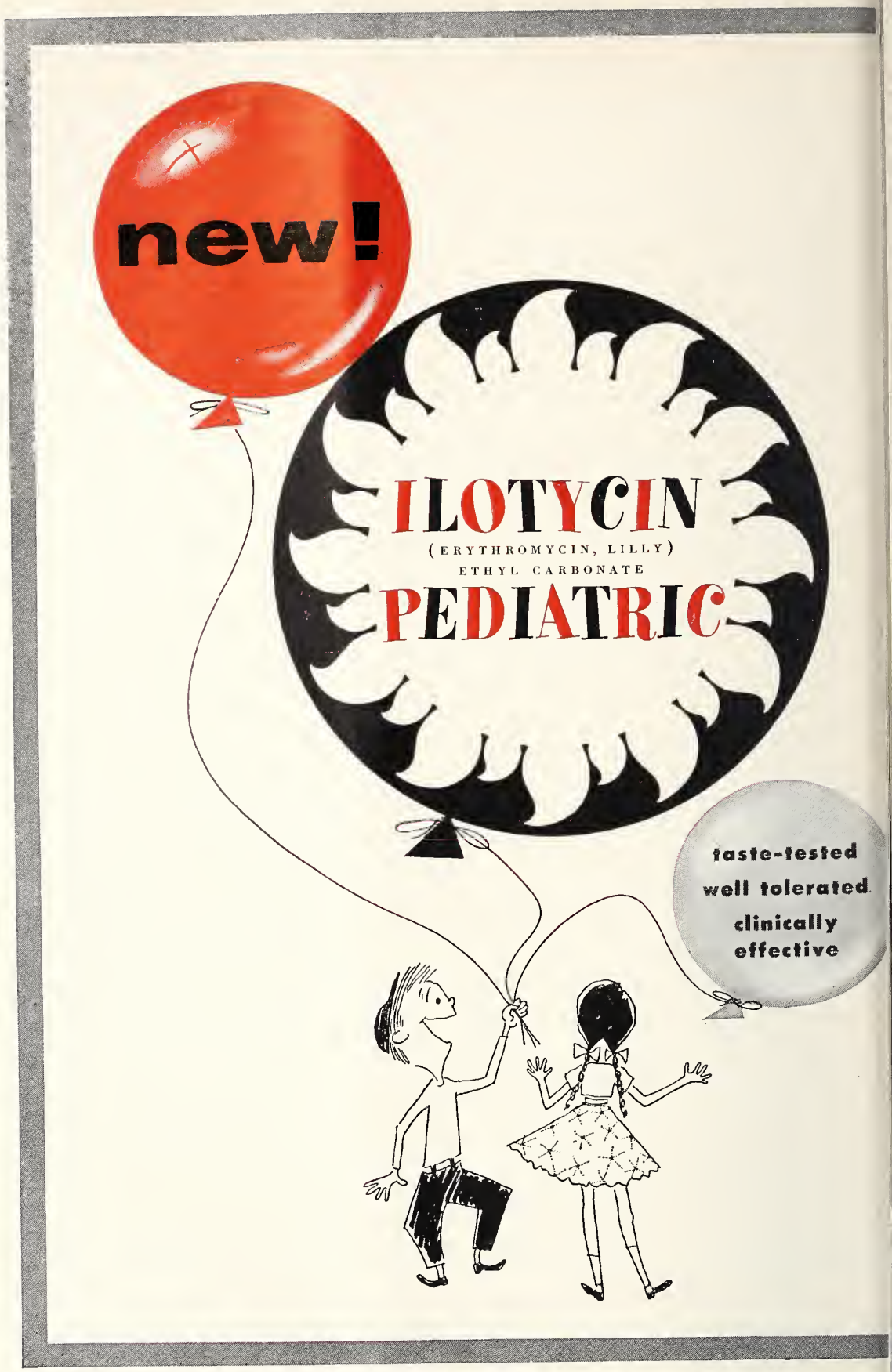
ESSENTIALS OF HISTOLOGY by Margaret M. Hoskins, Ph.D. and Gerrit Bevelander, Ph.D., New York University, 2nd Edition with 135 Text Illustrations and 2 color plates. Published by C. V. Mosby Co., St. Louis, Mo., 1952. Price $4.00.

This is a second edition of a book which presents the morphologic characteristics of tissues and organs of the body. The organization and arrangement of the several chapters have been materially altered from the first edition. Several sections have been revised and rewritten with new material added in a number of instances. Several illustrations have been reversed or replaced in order to help clarify the text in laboratory studies.

Most of the illustrations were drawn from slides in the author's student loan collections. And they may be taken as a guide to any similar set of preparations. Text and illustrations are intended to serve as a foundation for histologic study on which the individual teacher may build such superstructures and detail or theoretic material as conditions of his own course permits.

There are seventeen chapters, covering the essentials of histology. The authors begin with description of epithelia; next follows a chapter on connective and supporting tissues. All the successive chapters take up in good order the various portions of the human body. The illustrations are particularly to be commended. They are sharp and distinct and well assembled.

The authors have fulfilled their function and have given a fine example of a minor small textbook on histology. It should prove essentially useful to students. Graduates in medicine will find this a good book to refer to when a physician is in doubt about normal histology in any part of the human body. R. B. H. G.


new!
ILOTYCIN
(ERYTHROMYCIN, LILLY)
ETHYL CARBONATE
PEDIATRIC
taste-tested
well tolerated
clinically
effective

Special Article

IS PRESENT CIVIL DEFENSE PLANNING REALISTIC?

CARROLL P. HUNGATE, M.D.
KANSAS CITY, MO.

In a recent article certain misconceptions concerning nuclear explosions were discussed. With an objective in view, many controversial points in Civil Defense planning were deliberately raised.

The basis for present Civil Defense planning is the Hiroshima or Nagasaki type of attack. Some might argue this point but most written material contains the conventional ½ mile, ¾ mile, 1 mile, 2 mile and 3 mile areas of destruction. Only one atomic bomb is discussed. No other types of bombs are mentioned.

If one were to truthfully prepare for all out atomic war, there is no way in the world one could evade personal injury or death except through the medium of an early alert—one or two hours—and orderly evacuation of cities.

Consider for a moment an attack by a plane carrying several atomic bombs, other planes with fire bombs, others with biological and chemical agents. Scattered throughout a city where could one find protection for hundreds of thousands or millions of people? Shelters do not provide protection in fire storms. Can we afford to let our people take it like sitting ducks? The casualty rate would insure silent factories for there would be but few left to man the machines or fight the fires.

Suppose we cannot evacuate our cities because the warning will be of too short duration. Then we must change our concept of Civil Defense planning. At present, we are concentrating on the program within the target area. Mobile support and mutual aid is lagging. With several atomic bombs, fire bombs, biological and chemical warfare agents dropped over a city our metropolitan civil defense organization will go up in smoke. We would have but a handful remaining. Only mutual aid and mobile support units could give worthwhile assistance to the stricken city.

A reevaluation of our civil defense planning must be made at an early date. The following five point program is in order:

1. The emphasis placed on metropolitan civil defense organizations must be transferred to mutual aid and mobile support units.
2. Extended research to provide air raid warnings of from one to two hours duration or more.
3. Evacuation drills of cities with city ordinances to make the drills a must.
4. Relocation of medical supplies outside target areas.
5. Education of the rural population that theirs is the responsibility for survival in the Atomic Age.

These procedures are not popular but we cannot continue to prepare and plan for an era that has passed. This is the age of more powerful weapons. Our potential enemies are thinking, no doubt, of ways to deliver a knock-out blow, not of dropping one atomic bomb over one city.

This is not a new conception, but one we have not wanted to accept. Planning is made easier if we think in terms of Hiroshima and Nagasaki. Let's at least face the facts and not mislead ourselves about the efficiency of our present civil defense planning—emphasizing metropolitan programs.

934 Argyle Bldg.

Opinions are those of the author and not the official opinion of the Navy Department.

Captain, MC, USNR, Senior Medical Officer, U. S. Naval Air Station, Olathe, Kansas.

BOOK REVIEW

Diseases of the Foot, by Emil D. W. Hauser, M.D., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopedic Surgeon, Passavant Memorial Hospital, Chicago. Second Edition, illustrated. W. B. Saunders Company. Philadelphia and London. 1950. Price $7.00.

Textbooks on orthopedics are not numerous, particularly those books relating to foot problems. The author has long recognized the need for a concise well written, well illustrated book regarding the numerous problems existing in modern times and that the lack of understanding of these foot problems among the medical profession has resulted in the great majority of these patients falling into the hands of inexperienced and unqualified nonmedical personnel for the attempted relief of these problems.

The book is more than four hundred pages; it is well printed and the illustrations are particularly worthy of praise. The author rightly feels that function is a primary consideration in the treatment of any condition affecting the foot and he has made this the theme throughout his text. The book includes a concise review on the anatomy and physiology of the foot, as well as the fundamental principles of a foot examination. It includes the many foot problems that affect both the child and the adult such as mechanical instability, postural and circulatory disturbances, fractures, dislocations and sprains, infections both of soft tissue and of bones and joints, tumors of the foot and diseases of the skin and nail. The author has succeeded in making this book a practical one for the use of physicians in the care of their patients. The book represents excellent organization by those who were concerned in its preparation and it is recommended without reservation to the medical student, the house officer and to the practicing physician.

C. M. F.

OUR OUTLOOK

PARKE M. BANTA*
WASHINGTON, D. C.

I HAVE BEEN ASKED to discuss, in a general way, the thinking and philosophy of the Department of Health, Education and Welfare.

The Department is new. Indeed, constituted on April 11 through Congressional action on Reorganization Plan No. 1, the Department is less than sixty days old.

Its constituent members, however—the Office of Education, the Office of Vocational Rehabilitation, the Food and Drug Administration, the Social Security Administration and the Public Health Service, along with a number of federally aided institutions, have had, shall I say, a long and interesting history.

All told the Department has about 37,000 employees, not all in Washington, but in many places about the country. The Department is responsible for the annual disbursement of more than three billion dollars. More than 90 per cent of this total represents grants-in-aid, chiefly to the states, for the various public assistance programs; for vocational rehabiliation; child welfare services; research in various fields of health; prevention and control of communicable diseases, hospital construction under the Hill-Burton Act, and the payments to individuals of old age and survivors insurance benefits.

It is no secret that to meet the overall cost of all the programs of the Department of Health, Education and Welfare requires a large sum of money, regarding which, at times, there is much controversy.

A new Administration under the leadership of President Eisenhower has taken power at a critical time in the world's history.

We are all familiar with the word "crisis." We hear it so frequently that we wonder sometimes if we are participating in the death throes of an old civilization or the birth pangs of a new one. Maybe it's both.

We know, for example, that every problem of government that we face today is affected, in one way or another, by the expansion of the Soviet despotism during the last decade. This despotism has grown until, along with its satellites, it dominates half the globe.

The enormous expenditures that government must make come, to a large degree, from this threat.

But the Communist enemy represents more than just a military threat. It has for years operated a conspiratorial apparatus throughout the world, its propaganda has been incessant, it succeeded in penetrating our own government. No one can calculate the damage which may have been done. In ways both gross and subtle, the doctrine of violent overthrow has been altered and adapted for infiltration purposes. As the President has said: "We live in an age of peril."

It therefore becomes a question of how to live through this "age of peril," and retain our freedom and our sound national economy.

It is impossible to banish the consciousness these threats in considering what, in our time, the philosophy of the new Department of Health, Education and Welfare is and ought to be.

Government has great responsibility to the people, and prudence, as well as decision, should be the order of the day.

I am sure this is the basic reason why it is that Congressman Carl T. Curtis of Nebraska, Chairman of the Social Security Subcommittee of the House Ways and Means Committee, intends to take a good look at the whole program of Social Security as it relates to benefits and assistance to the aged. Mr. Curtis and members of his Committee staff have told me the objective is to see if ways and means can be found to improve the program.

Incidentally, your own hard working and able young Congressman, the Honorable Tom Curtis, is a member of this Subcommittee. I am confident that his knowledge of the problems involved and his cooperation in the work will contribute greatly to the success of the study.

Moreover, Secretary Hobby has been meeting with a representative committee of technical consultants discussing the various aspects of the Old-Age and Survivors Insurance Program to determine, if possible, proper methods for its extension, or at least to advise her of what may be the effect, economically and otherwise, of the many and various suggestions for its extension, and at the same time explore the feasibility of any and all plans which may be submitted for improvement of this Social Security Program.

Also, for the last few decades we have seen governmental functions and responsibilities shifted from the local to the state and from the state to the federal government. Therefore, it seems appropriate to examine the present relationships among these three levels of government to determine where and how a reallocation of these functions and responsibilities will substantially reduce the cost of government.

To accomplish this examination or study, Senator Taft, in response to a request by President Eisenhower, introduced a bill (S. 1514) to establish a Commission to be composed of twenty-five members, fifteen of whom are to be appointed by the President of the United States, five by the President of the Senate and five by the Speaker of the House. It passed the Senate on May 6, 1953.

Speaking in support of his bill (S. 1514) Senator Taft said: "It proposes to create a joint legislative and public commission, . . . to study the whole

---

General Counsel, U. S. Department of Health, Education, and Welfare.

* Before the St. Louis County Medical Society, Sheraton Hotel, St. Louis, Missouri, Wednesday, May 27, 1953, 8:00 p.m.

problem of federal aid to states, and to determine the correct basis of such federal aid, whether it has gone too far, or has not gone far enough, and what fields should be covered, if aid is approved."

In the same connection Senator Hendrickson of New Jersey said of the bill: "It will establish a Commission to examine the entire field of overlapping functions, duplication and waste, and all the knotted vines in a jungle of confusion which have grown up and entangled our fiscal relationships and our budgets at all levels of government in recent years."

So, the study known to be long overdue, if approved by the House, will be made, and I believe the result will be to find out where and how to reallocate federal-state-local governmental functions and responsibilities to avoid the present duplication and thus substantially reduce the cost of government.

Now for a few minutes, I want to pursue a theme which may be of slightly more interest to you.

It has to do with what we all know as "compulsory" health insurance or "socialized" medicine.

President Eisenhower, in his address before the special session of the House of Delegates of the American Medical Association on March 14, 1953, said, and I quote him: "I have found in the past few years that I have certain philosophical bonds with doctors. I don't like the word 'compulsory.' I am against the word 'socialized.'"

Mrs. Hobby said recently, in answer to a direct question: "I am opposed to socialized medicine. . . ."

I am sure that I need not remind you that this philosophy of our President and our Secretary ranks as a distinct departure from the point of view which, in recent years, gave rise to repeated demands upon Congress to enact "compulsory" health insurance or "socialized" medicine.

You have residing in your midst a man, the former United States Senator, Forrest C. Donnell, who has had much more experience than any of us here in dealing with the true import of these words "compulsory" and "socialized" as they relate to the present theme. It was through his tireless efforts that we have spread before us a factual record that tells the real story about "compulsory" medicine. I would like to tell you a little about this, to give you a clearer picture of what Senator Donnell actually did.

The high tide in the head-on efforts of the promoters of socialized medicine came in the 79th and 80th Congresses. The compulsory health insurance bills introduced in those Congresses were referred, in the Senate, to the Committee on Labor and Public Welfare. The responsibility for cross examination of witness before that Committee fell upon Senator Donnell. Witnesses of proponents were marshalled in squads. No stone was left unturned. Senator Donnell went to work. As in many great operations his method was simple though the labor was exhausting. In addition to the intensive study of the subject, it consisted of listening intently to each sentence of the witness, then going back to break up the sentence—sometimes word for word. He would demand source, authority, name, date and hour.

When the Senator was through, inaccurate statistics had been torn to shreds, and every unsound argument had been labeled for what it was. The hearings began on May 21, 1947, and did not conclude until June 1, 1948. If you have not done it, you should look at that astounding record. It contains the facts about compulsory health insurance, and it is a monument to a Missouri Senator. Only a few days ago a friend of mine on Capitol Hill in Washington said this to me, speaking of Senator Donnell: "The people of this nation owe him an eternal debt of gratitude for his leadership in setting the facts straight about socialized medicine."

It is pleasant now to be able to turn to a different kind of story, one in which the Public Health Service played a brilliant part.

The story, which I am going to tell, was published in the *New Yorker,* June, 1949. It shows what remarkable results can be obtained from free, voluntary and unobstructed cooperation.

Toward noon on March 28, 1947, the Medical Superintendent of one of the New York municipal hospitals, the Willard Parker Hospital for contagious diseases, telephoned the city hospital commissioner that two patients had developed eruptions that looked suspiciously like smallpox.

Smallpox does occur in this country but doctors tell me that in many localities it is so great a rarity that local physicians have never seen a case. So widespread has the victory of science over smallpox been that a doctor may have great difficulty in diagnosing the disease.

At all events, the infection in this instance was recognized. Question: How did the two patients become infected? One patient was a 26 year old man, the other an infant. Each came from different districts of New York City. There had been no previous contact between them.

Now the great detective story began. It was essential that the diagnosis be confirmed. I am told that the intricate tests by which the presence of smallpox virus can be detected are time consuming. At any rate, the Army Medical Laboratory in the Walter Reed Hospital in Washington was equipped to do this work expertly. Fluid from the lesions of the two patients was flown to the Washington laboratory.

Note that in this second step, municipal hospital authorities in New York moved for aid to the Army medical people and the aid was forthcoming.

Back in New York while the tests were being made in Washington, the hospital records were searched.

It developed that not long before, both patients had been hospitalized, then discharged and then

returned once more. Next, within a day or so, a 2½ year old boy in the hospital exhibited smallpox symptoms.

It was deduced that all three patients had contracted smallpox from someone who had been there beween March 7 and March 13—that is, about two weeks before the symptoms were first recognized. Who? The physicians on the staff bent their minds to the problem. The hospital superintendent's deputy began to comb his memory and finally came up with what proved to be the key to the mystery—the strange case of Eugene LaBar. Who was LaBar?

He was an American who had lived for some years in Mexico. Toward the end of February 1947 he and his wife left Mexico and headed for New York, travelling by bus. It was the intention of the couple to go to Maine, but on the way LaBar became ill. He complained of a headache and a severe pain in the back of his neck.

As the bus rolled across the continent, New York bound, Mr. LaBar dosed himself with a gruesome assortment of remedies—aspirin, codeine, nembutal and phenobarbital. Be the time he reached Manhattan he was a very sick man and was hurried to a city hospital. The possibility of smallpox was considered and then dismissed. LaBar had symptoms of about everything.

After lying in an agony of delirium for two days LaBar died. The autopsy disclosed enough internal dishevelments to account for almost anything, but even then it was not recognized as a virulent case of black smallpox.

You will remember that the first two cases were diagnosed on March 28. On April 4 the Army Laboratory reported that the tests revealed smallpox and no mistake.

It was now clear that the 26 year old man, the infant child and the 2½ year old boy had all been sick in the same hospital with LaBar. With this information in hand, there commenced one of the greatest public health enterprises ever undertaken.

Every person who lived in or who was discovered to have come near the dwellings of the three smallpox patients was vaccinated. The staff of the hotel where the LaBars had stayed were vaccinated and those staying at the hotel.

The Public Health Service, a part of the new Department which I serve, began linking up the chain, giving vaccination warnings at every place that the LaBar's bus had stopped on its way across the country: Laredo, San Antonio, Dallas, Tulsa, Joplin, St. Louis, Indianapolis, Cincinnati, Pittsburgh. Next the Public Health Service got on the trail of Mrs. LaBar, found her and isolated her.

Finally the vaccination of New York City began, starting with the Mayor.

Representatives of the great pharmaceutical houses were called in and asked to turn to in boosting the supply of vaccine. A city appropriation for $500,000, mostly to be spent on vaccine, was made. A thousand doctors and hundreds of clerks were recruited. Vaccination centers were established at police stations and other public places throughout the city. Hour by hour, the radio and the press rehearsed the story and the people *en masse* moved toward the vaccination stations. It is hard to exaggerate the spectacular character of the undertaking. A line, two abreast would form around a city block. In the front hall of each police station stood two cops, one on either side of the line. Over and over they barked the order: "Roll up the sleeve on your right arm!" Behind them stood two nurses, moving like clockwork as they swabbed arms. And directly behind them stood two doctors, each ready with the needle. One, two, three. One, two, three. All day long and through the evenings. Doctors, nurses and cops moving off and on in shifts.

With what result? The result was that within twenty-eight days some six million, three hundred and fifty thousand persons were vaccinated in New York City and the possibility of a smallpox epidemic was stamped out.

Physicians in private practices, nurses from private and public hospitals, the U. S. Army Laboratory, the Public Health Service, government from the federal down to the local level had all participated in this extraordinary achievement.

Americans take a just pride in their ability to mobilize to meet an emergency. But they could never do it unless the groups involved were free to grow, to develop local and individual responsibility and renew their vitality.

The Public Health Service did its part and all the other groups did their part and the result was an astounding success.

I have told this story because it so clearly illustrates what may be accomplished when all hands work together to do a job. The Department of Health, Education and Welfare is designed to render services, particularly in the field of public health, by means of a great cooperative effort. There is no intention that the federal government, through the Department, is to do the whole job. It is to be a joint effort, by local communities, by states and by private groups and individual citizens, as well as the federal government. Our Secretary has said: "Its aim is service, its philosophy is cooperation, and its method is teamwork." I believe that your Society and all of its members will approve this approach to the nation's health problems, and that you can always be counted on for full cooperation.

. . . The use of generalities . . . is impossible, but it may be safely stated that amputation represents the preferred therapy for the osteosarcoma, chondrosarcoma, fibrosarcoma and malignant giant cell tumors. Roentgen therapy, on the other hand, is advisable in multiple myeloma, and probably offers as much hope for cure in Ewing's sarcoma and reticulum cell sarcoma.—H. R. McCarroll, M.D., "Management of Malignant Bone Tumors," *J.A.M.A.*

"...come to the fair"

AND you'll see a real cross-section of American life.

Country folks and city folks rub elbows . . . the man in overalls swaps the time of day with the chap in the natty sport jacket, while their wives swap cherry pie recipes and latest thoughts on child care.

From city and small town and wide rural acres come the people from the offices and the assembly lines . . . the corner filling stations and the farms.

One common bond links them all together — their membership in BLUE CROSS and BLUE SHIELD. For these prepayment plans do not seek only the big industrial group, only the select risk. Their job is to protect *people,* wherever they work or live . . . to give employed people a coverage they can keep when they change jobs or take with them when they move.

In all walks of life and in all types of employment, people look to BLUE CROSS and BLUE SHIELD for the best in health care protection.

BLUE CROSS
BLUE SHIELD

St. Louis — Kansas City

• HOSPITAL MEDICAL SURGICAL PLANS SPONSORED BY DOCTORS

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

Importance of Our Helpers

Every physician depends to a great extent, whether or not he will acknowledge it, on those associates closest to him. This includes medical colleagues, but more specifically, we herein refer to the manner with which the physician's *alter ego* meets the public in his office, at his home or in the hospital. The public reaction, in all these phases, is conditioned upon the way the phone is answered, how patients are cared for, how they are handled.

For instance, let's take this sentence (we have forgotten the source); let's place pronounced emphasis on the various words: "I never said you stole money!" Just for the fun of it, kick this around; take each word, accent it; and this sentence will convey at least six dissimilar ideas.

Likewise, a patient calls your office or home and is told, "I don't know where he is, and I don't know where to get hold of him." Does this mean your secretary or phone answerer at home does not give a tinker's dam where you are, perhaps hopes you never show up? Here again, four or five different ideas may be conveyed by this simple sentence, depending on the voice on the other end of the line, the emphasis and inflection, as heard by the patient.

If any physician wants a double dose of poison, just tell a patient you will order an enema or some new kind of medicine. That's really leading with your chin! If that enema is not given, or that new kind of medicine is not administered, *and pronto,* watch out. Every relative, as far removed as 32nd cousins, will phone, wanting to know, "Why are those nurses neglecting my poor, dear Aunt Minerva? She heard you say she was to get an enema this morning, and here it is 1:00 o'clock, and she still hasn't had it. It's a shame the way they're mistreating and neglecting her." This harangue will last as long as you'll listen, all precipitated by another example of undue emphasis on how our helpers meet and handle the public.

This is not written in a comic vein; it should stimulate earnest thought, self-analysis. Physicians are vulnerable to phone calls at all hours, and a part of our practice, our success or failure as practitioners, depends on the way we meet the public, and the manner with which our helpers handle the public. Many physicians have found out, belatedly, and with regret, the importance of helpers who truly tried to be helpful, in contradistinction to those who merely go through the motions of assisting, while at the same time doing the physician incalculable harm and damage.

VINCENT T. WILLIAMS, M.D.

At the Patient's Level

Nearly everybody is very fond of some one doctor, but is soured toward organized medicine. Twenty years of effort on the part of past administrations to undermine and berate us is responsible for this hostile and questioning attitude.

Remember that while the one-sided tussle was being waged, our enemies had unlimited government men and funds and even the government presses at their disposal while we, in our efforts to defend ourselves, were accused of illegal lobbying.

The point of this editorial is to point out that if our members, each and every one, would only talk this over briefly with all his patients—and also other friends—we would bring about a correction of the evil that has been done us, a correction on a very broad and far reaching basis. But to bring this correction about, we will have to exert ourselves and talk to our patients and explain pleasantly and briefly the situation.

FRANCIS T. H'DOUBLER, M.D.

POW's in the News

The frequent mention of prisoners of war in press articles of recent date serves to recall the misery and the horror of warfare. Only those who have seen and talked with these sad cast-offs from the advancing tide of war can appreciate the ravages that leave their marks upon these unfortunates. I saw many POW's during and after World War II, walking into stateside hospitals for rehabilitation and treatment after horrible experiences in enemy detention centers. Painful memories that will never escape me are brought back by these victims of the Torquemadas of the 20th century. The stupidity of war and of the men who make wars is emphasized by nothing more vividly than the human wreckage that war leaves behind.

Perhaps it is too much a dream to envision an enlightened era in the future when men who make policy will remember the lusterless eyes—dim of vision and shadowed by suffering—of the POW. Perhaps those who would live by the sword could be taught the pitiful symptomatology of malnutrition, with its accompaniments of agonizing polyneuritis, dermatitis and the pitting edema of hypoproteinemia. They did not give Purple Hearts to the shell-shock victims of World War I nor to the combat-fatigue patients of World War II, but their trauma was no less real nor less permanent than those with organic injuries. Never try to explain to a boy who was forced to watch his captors flog his fainting brother, tied to a post in a sun-baked yard for hours without water, why it is necessary to use high level diplomacy in the making of peace treaties. Nor is it easy to sell the brotherhood of man to a boy who watched a jeering guard put a bullet through the brain of a buddy who collapsed in a death march.

All the news about POW's makes me pensive.

JEROME I. SIMON, M.D.

A Self-Limited Generation

The human is unique in his predisposition to atherosclerosis. In this country and western Europe one half of the people may become affected before the age of 50. Press reports to the laity have generated a fear as marked as that of cancer, and the demand that physicians apply all known preventive measures. Expediency demands application of present knowledge in the control of this problem.*

Laboratory studies show that the intravascular plaques have a lipid composition similar to that of plasma, that their formation is accelerated by hypercholesteremia, and by hypertension. Regrettably, there is no absolutely constant chemical factor in this condition. Hypertension is of utmost importance since it increases the rate of lipid deposit, favors the rupture of vessels weakened by atheromatous patches, and complicates the control of clotting responsible for many severe complications.

Two types of diets are now in popular use. One rigidly avoids cholesterol; the other emphasizes limited fat ingestion, thus avoiding obesity. Cholesterol-free diets, with no milk, egg or other staples, are difficult to maintain for prolonged periods. Further, laboratory studies show that absolute cholesterol-free diets have little effect in lowering the level of serum cholesterol; decreased cholesterol in a fat-free diet reduces the level of Gofmans S_F (blamed for much of the mischief) 10 to 20 bodies. Isotope studies have shown that many cells may produce cholesterol in amounts greater than that ingested in usual diets. Although known for centuries that gluttons have a higher morbidity and mortality rate from vascular disease, Wilens' autopsy statistics from Bellevue show a definite increased number and extent of atheromatous plaques in the obese. Conversely, Dedichen showed that during enforced restriction to a low fat, low caloric diet during World War II, circulatory disease mortality and incidence of thrombo-embolic phenomena, were sharply reduced.

Present information, although incomplete, indicates that overnutrition predisposes to atherosclerosis. Certainly during the period when further investigation is attempted, a low fat, low caloric diet may be advised with the expectation of partial protection against the complications of atherosclerosis.

STANLEY L. GOLDMAN, M.D.

* David P. Barr: *American Journal of Medicine* (December 1952).

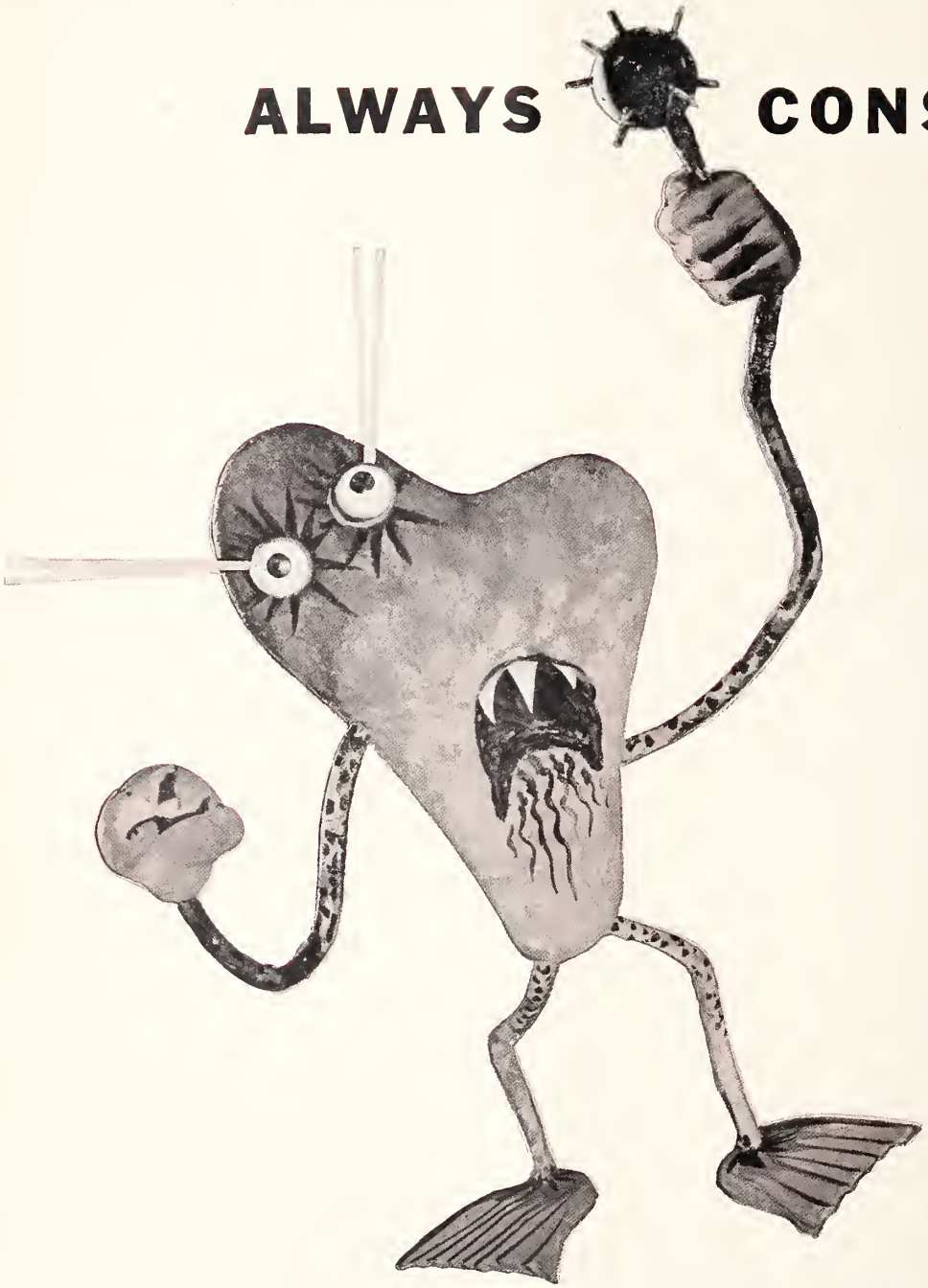
Do You Have Courage?

"It takes courage to keep from talking about others when others around you are talking; to stand up for an absent person who is being abused; to be somebody by holding fast to your ideals when it causes you to be looked upon as queer; to refuse to do a thing that is wrong, others do it—but that is what makes you big."

HERBERT ACUFF, M.D.

When you suspect antibiotic hypersensitivity

ALWAYS CONSIDER



ERYTHROCIN*

...A SELECTIVE ANTIBIOTIC

ORALLY EFFECTIVE

against staphylococci, streptococci and pneumococci —especially indicated when patients are allergic to penicillin and other antibiotics or when the organism is resistant.

A DRUG OF CHOICE

against staphylococci—because of the high incidence of staphylococcal resistance to other antibiotics.

A DRUG OF CHOICE

because it does not materially alter normal intestinal flora; gastrointestinal disturbances rare; no serious side effects reported.

ADVANTAGEOUS

because the special acid-resistant coating developed by Abbott—and Abbott's built-in disintegrator—assure rapid dispersal and absorption in the upper intestinal tract.

Use ERYTHROCIN

in pharyngitis, tonsillitis, scarlet fever, pneumonia, erysipelas, osteomyelitis, pyoderma and other indicated conditions. Abbott

* Trade Mark
Erythromycin, Abbott, *Crystalline*

Fraternally Yours

Random Thoughts in Missouri Dog-Days

Most of the larger medical meetings are over for the summer, and we can look forward to sweating out our individual practices, anticipating a few weeks of vacation, or reminiscing on vacations just completed. Perhaps many will have been home long enough by now to have recovered from their vacations and have started planning for next year.

This is a bad time to bring up the following topics because, in Missouri, in dog-days, most of us would rather not think or act. If possible, we'd rather sit on the back or front porch (whichever's the cooler), and kinda "let the rest of the world go by."

However, the first item which we should call to your attention concerns the World Medical Association. The objectives of this organization are simple, clear-cut: To promote international collaboration between medical scientists throughout the world. The United States Committee invites all physicians to participate. Our National chapter has its headquarters at 2 East 103rd Street, New York 29, New York. Annual membership dues are $10.00, and the work which this group is doing cannot be overemphasized. Please write Headquarters for literature, especially for their pamphlet, "WHO, World Health Organization, What It Is, What It Does, and How It Works." We feel sure our members who will look over this prospectus, will want to help by becoming members.

Another topic which we would like to call to your attention, is the American Medical Education Foundation. This group (in our State, headed by the Missouri State Medical Association Committee, under the Co-Chairmanship of Drs. C. Edgar Virden and James P. Murphy), is trying hard to bring Missouri up in the list of states who have contributed to this Foundation. Last year we were only thirty-fourth among the forty-eight states.

Every physician should realize that the private medical schools face a two-horned dilemma. Their income, in almost every instance, fails to pay the way by a wide margin. They want to improve their teaching facilities, to expand, but if they accept government money, will they not then be subject to governmental intervention in teaching medicine? These are the two problems faced by all medical schools, especially those who cannot depend on state legislatures to appropriate sufficient funds to maintain them.

In the last few years, several million dollars have been funneled into the various private medical school treasuries in an attempt to prevent government subsidy. It is not an idle dream that any agency subsidized by the government may be controlled by the government; the Supreme Court of the United States has already ruled on that one!

We have no magic appeal to make. There are those who think their tuition literally paid their way. Of course, this is a naive philosophy. Actually, each one of us owes our various alma maters hundreds of dollars (perhaps thousands) in excess of the tuition we paid.

This organization is doing a splendid job in aiding the private schools, it is sponsored by the American Medical Association, although dissociated from it. Contributions are tax deductible items. Any sums given for this purpose may be paid out in reasonably painless monthly, quarterly or annual contributions, and each donation may be allocated to the particular school of the donor's choice.

Thus, each of us, through this organization, is enabled to clear with his conscience, that inside feeling, perhaps never openly expressed, "Yes, I do owe the old school something."

How about reaching for the check-book, and forwarding, now, a part payment on the debt each of us owes to his Alma Mater?

Two more ideas, and we're through. Both of these relate, especially, to our two metropolitan areas. The first is Civilian Defense. As this involves primarily St. Louis and Kansas City, may we stress that each of us in these two centers do his share in promoting this program? While it is true that in our two metropolitan areas of Missouri, much preparation and organizational work has been accomplished, there still exists an apathy among a great many of our colleagues to get busy and join in this movement which someday (and the unpredictability of that day makes most of us lethargic!), may mean the difference between life and death to thousands, including our own lives. We cannot stress too much, the importance of cooperating in this matter.

As our final reminder, the Academy of Science of St. Louis needs help in developing their Museum of Natural History, Science and Industry. Those of our colleagues in St. Louis are to be congratulated on a venture of this worth and importance. Such an institution would add another strong structure of culture, associated with the other educational and scientific organizations in St. Louis. We join with A. N. Arneson, M.D., President of the St. Louis Medical Society, in urging all who can to contribute to this worthy group.

V.T.W.

Missouri Medical Meetings

Sept. 27-Oct. 1: Kansas City Southwest Clinical Conference, Municipal Auditorium, Kansas City.
Oct. 12: Missouri Health Council Annual Meeting, Hotel Governor, Jefferson City.
Oct. 28-29: Missouri Academy of General Practice Annual Meeting, Hotel Governor, Jefferson City.
Dec. 1-4: American Medical Association Clinical Session, St. Louis.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

Salisbury did itself up proud on Sunday, May 24, when it designated that particular day as Dr. Hawkins Day and then proceeded with the proper fanfare. All of this activity was for the purpose of honoring Dr. G. W. Hawkins of that fair city on completing fifty years of medical practice on May 25. The official program was held in the high school auditorium beginning at 2:30 p.m. The principal speaker for the occasion was Dr. Vincent T. Williams, Kansas City, Editor of Missouri Medicine. Some 1,200 people, old and young, crowded into the school auditorium to pay tribute to a doctor who meets all of the qualifications implied in the term "Family Doctor." A recent note from Dr. Hawkins says that he is having difficulty coming down out of the clouds "As air-pockets seem still before me."

A "Health Education Workshop" was held on July 6 to 8 at Central Missouri State College, Warrensburg, Missouri, using as its theme "Better Health for School-Age Children." The workshop was sponsored jointly by the Missouri Division of Health and the Central Missouri State College. Group discussions centering around the Conference theme were enhanced through addresses by outstanding specialists in health each day. A group of distinguished persons also served as consultants to the discussion groups. The keynote address on the opening day was given by Guy N. Magness, M.D., University City, President of the American School Health Association, and School Physician and Health Officer, University City. (Incidently Dr. Magness is President of the St. Louis County Medical Society and a member of the Infant Care Committee of the State Medical Association.)

Some 150 people attended the Annual Spring Banquet of the St. Louis County Medical Society on Wednesday night, May 27. This gala affair marked the 50th Anniversary of the Society. There are two charter members living with one of these still active in the practice of medicine, namely, Dr. Otto Koch. At this celebration Dr. Koch revealed the secret of what it was like practicing medicine fifty years ago. The principal address of the evening was delivered by Mr. Park M. Banta, Counsel for the Federal Department of Health, Education and Welfare. Mr. Banta is a native of Iron County, Missouri, and has represented this state in the National House of Representatives.

Under the sponsorship of the State Association's Committee on Health and Public Instruction an educational health exhibit will be presented at the Missouri State Fair, Sedalia, Missouri, August 22 to 30. The display will be centered on "Obesity" and will be secured, for the most part, from the Committee on Scientific Exhibit of the American Medical Association.

A number of County Medical Societies over the state have worked out a relationship with the Missouri Academy of General Practice whereby the Academy's Educational Committee will furnish some of the scientific programs this fall and winter for these societies.

Members in the News

At the recent A.M.A. Golf Tourney, **Delon A. Williams**, M.D., Kansas City, was only two strokes behind the winner in the Championship flight. As runner-up, he took his loss philosophically, but gave two reasons why: "Two too many strokes."

Burge Hospital, Springfield, recently held its first homecoming for the school of medical technologists. **E. B. Hanan**, M.D., Director of the school, was on hand to welcome the guests, and Mr. Lester E. Cox, chairman of the Burge Board made the principal address.

Plattsburg's new physician is **John Mabrey**, M.D. He has just completed his internship at Missouri Methodist Hospital, St. Joseph.

"Because of his honesty, sincerity, intellect and profound interest in postgraduate medical education" . . . Dr. **Julius Jensen**, St. Louis . . . will be the 1953 recipient of the American Medical Writers' Association Distinguished Service Award "for unusual and distinguished service to the medical profession."

A poignant human interest story seen in the lay press: "Dr. Charles R. Sasaki, St. Charles physician who died last week, must have died happy. Just before his death he was subject to call to medical service by Uncle Sam, but almost 2,000 St. Charles friends got up a petition to "keep him out of the Army and in St. Charles as essential to the city's welfare." Dr. Sasaki will live a long time in a whole town's memory.

The General Practitioners Study Club in Overland, on February 18, had as guest speaker, **Julius Jensen**, M.D. His subject was "Coronary Disease."

"Problems Related to Femoral Hernia" was the topic presented by **Joseph C. Peden, Jr.**, M.D., at the St. Louis County Medical Society meeting, February 11.

The Vincent Park Williams Memorial Lecture, Kansas City, was delivered late in May to a large and appreciative audience by **Warren H. Cole**, M.D., Chicago. Dr. Cole spoke on "Surgical Lesions of the Stomach."

The Fiftieth Anniversary Banquet of the St. Louis County Medical Society was held the latter part of May. The speaker was Parke M. Banta, Arcadia, General Counsel of U. S. Department of Health, Education and Welfare. Mr. Banta reviewed the general policies, plans and attitudes of the new department.

St. Louis City Hospital alumni met at the Starlight Roof, Chase Hotel, May 20, to hear Robert Burnes, Sports Editor of the St. Louis *Globe Democrat,* at their annual dinner meeting. Plaques of merit were presented to **L. R. Sante**, M.D., and **Avery P. Rowlette**, M.D.

Citing his broad background from drug store janitor to M.D., his many and varied religious contacts throughout his life, and his leadership in the foundation of the A.A.G.P., the Kansas City Academy elected **M. B. Casebolt**, M.D., Kansas City, Practitioner of the Year.

Among others, two MoMedics, **Harold Stricker**, M.D., Jefferson City, and **Robert H. Tanner**, M.D., St. Louis, entered the armed services in April. Dr. Stricker reported directly to Japan and Dr. Tanner reported to Ft. Benning, Georgia.

Missouri native son, currently at Kansas University Medical Center, **Chesterfield G. Gunn, Jr.**, M.D., Bethany, has been awarded an appointment as research fellow of the American College of Physicians. Dr. Gunn is currently engaged in experimental work on hypertension.

Worthy of note are the current ads in popular magazines, sponsored by Parke, Davis & Company. General theme is "in the hands of the physician, you're in *good* hands"—a neat PR package.

S.S. *United States*, out of New York June 5, listed **Sylvia Allen**, M.D., Kansas City, off for three months of European tour of psychoanalytic centers.

Paul N. Johnstone, M.D., Kansas City, was guest speaker at the Annual Banquet of the Missouri Association of Licensed Nursing Homes in Springfield.

The Borden Company's Prescription Products Division has announced an expenditure of $10.3 million in Missouri during 1952. This figure includes money paid for milk and other farm products, payrolls and taxes.

Kansas University Medical Center honored MoMedic **Jesse D. Rising**, M.D., Kansas City, at the end of the school year, when he was presented the Kansas Clock award as the G.P. in Kansas City who had given most freely of his time to the medical school in the last year.

University of Louisville graduate, **Edsell S. Reed**, M.D., has associated himself with **Joseph Fisher**, M.D., St. Joseph, in the practice of Radiology.

Starting with a class of three student nurses (of

whom one finished) in a twelve bed hospital, St. Luke's Hospital School of Nursing, Kansas City, observed its fiftieth year in May. Bishop Edward R. Wells was the principal speaker at the ceremony graduating nineteen students.

The passenger list on the *Queen Mary*, sailing May 13 for England, listed Dr. and Mrs. **Ralph E. Duncan**, Kansas City.

"For outstanding work in promoting the growth and development of St. Luke's Hospital, Kansas City, during the last thirty years" **John R. Smiley** was awarded a medal by Bishop Edward R. Wells at the Diocesan Convention in Sedalia.

Beginning June 1, the first home care program in the Midwest was started in St. Louis by Jewish Hospital under the direction of **David Littauer**, M.D., Executive Director.

Pettis County's first County Medical Forum was held in Sedalia in May. Speakers at the forum, open to the public, were William F. Brown, County Polio Chairman; **C. G. Stauffacher**, M.D.; **A. L. Walter**, M.D., and **C. Siegel**, M.D. The discussion covered the economics, diagnosis, treatment and prognosis of poliomyelitis.

St. Louis Academy of General Practice members convened June 5 on the SS *Admiral* for a social evening. Arrangements for the successful tour were made by **Norton Eversoll**, M.D., St. Louis.

The *Rolla Herald* reports that $166,000 of a $400,000 bond issue voted in 1947 for Phelps County Hospital has been paid off. It is anticipated that all of the bonds will be paid by February 1962.

Central Missouri Telephone Co. switchboards in Warrensburg were jammed for several hours by calls attempting to verify the death of **Ralph F. McKinney**, M.D., who was killed in a tractor accident April 20.

Among others, members of the St. Louis County Medical Society were invited to attend the opening of the new hospital at Troy on April 9.

At the city election at Raytown, **Dillard M. Eubank**, M.D., was elected as member of the Council.

James W. Colbert, M.D., new Dean of St. Louis University School of Medicine, was officially welcomed to the University at a dinner April 22. Chairman of the A.M.A. Council on Medical Education and Hospitals, Dr. Herman Gates Weiskotten, was guest speaker.

Kansas City organizations, including Municipal Auditorium, Starlight Theater and Blues Stadium, have agreed to use MSMA or county membership card numbers for paging physicians during performances.

Owner and founder of the W. E. Isle Artificial Limb Company, Kansas City, amputee **W. E. Isle** who became interested in the field after his own accident in 1906, died at the age of 68, April 20.

Speaking to the two day conference of the Missouri State Medical Secretaries and Assistants Society, **Ralph Emerson Duncan**, M.D., Kansas City, pointed out the economy of delegating many duties to trained assistants thus allowing the physician more time for diagnosis and treatment. New officers of the organization are: President, Mrs. Bertha Rose Welch, Sedalia; vice presidents, Mrs. Mary K. Shell, Fayette, and Miss Catherine Rand, Kansas City; recording secretary, Mrs. Edna Williams, Springfield; corresponding secretary, Miss Doreen Craig, Sedalia; treasurer, Miss Helen Middleton, Columbia, and Mrs. Vonnie Allin, Kansas City; and directors Mrs. Amy Shock, Jefferson City, and Miss Alta Bingham, Kansas City.

Eugene M. Bricker, M.D., St. Louis, is co-author with Frederick W. Klinge, M.D., of a recent article on urinary evacuation by ileal segments. They report the results of a study financed by the U. S. Public Health Service, conducted at Washington University.

Assistant to the Secretary of Defense, **Melvin A. Casberg**, M.D., recently of St. Louis, reports that the use of body armor by U. S. troops in Korea is reducing the mortality rate (now under 2 per cent) but is increasing the proportion of nonfatal extremity wounds (now about 70 per cent) by saving the lives of men who would otherwise die from body wounds.

Missouri representatives in the Washington news: Curtis (H.R. 4981), liberalizing maximum medical deductions to $1,250 for the taxpayer and each dependent; referred to Ways and Means Committee. Short (H.R. 5017) would amend the present law to permit appointment as medical officers in the armed services doctors of osteopathy who are eligible for licensure in the U. S.; referred to Committee on Armed Services.

Professor of Medicine, Washington University, **Carl V. Moore**, M.D., was the guest speaker at the Tacoma Academy of Medicine May 23. Dr. Moore's subject was "Newer Concepts of the Pathogenesis of Idiopathic Thrombocytopenic Purpura."

Charles E. Lockhart, M.D., Springfield, presented a paper titled "Cancer of the Breast" when he addressed a meeting at the University of Tennessee School of Medicine, May 22.

Claude E. Bohrer, M.D., West Plains, President of the Missouri State Medical Association, spoke on "Lay and Professional Relationships" when he addressed the Annual Session of the Ozark Regional Heart Association, in Springfield, June 25.

A. Denton Vail, M.D., Springfield, presented a paper entitled "Routine Exposure of the Recurrent Laryngeal Nerve in Thyroidectomy" before the annual meeting of the American Goiter Association held in Chicago May 7, 8 and 9. Drs. **F. T. H'Doubler, Sr.**, and **F. T. H'Doubler, Jr.**, were coauthors of the paper.

MoMedics, all St. Louis, featured as guest speakers at summer meetings included **Willard M. Allen**, M.D., Rocky Mountain Cancer Conference; **Louis T. Byars**, M.D., and **Robert A. Moore**, M.D., South Texas Postgraduate Medical Assembly.

Indicative of scientific and PR progress is the bimonthly *M.S.M.T. Speaks*, put out by the Missouri Society of Medical Technologists. Currently running Vol. II, the mimeographed bulletin reports Missouri notes of the various technologist societies and individual members.

Of special interest to at least two MoMedics was the victory of Hickory Chuck in a harness race at Maywood track in June. The pacer, owned by **G. Farrell Webb**, D.D.S., Kansas City, was thought to be "through" after rupturing a tendon in 1950, and attempts at firing the tendon were unsuccessful. However, tendon grafts by **Garrett Pipkin**, M.D., Kansas City, repaired the injury. The pacer, ten months postop, represents the first recorded instance of a win following such an injury.

Off for Europe on May 8, **Robert Dean Woolsey**, M.D., St. Louis, will conduct a series of clinics in neurosurgery at the University of Turkey at Istanbul. His wife, **Doris Searles Woolsey**, M.D., will hold clinics in otolaryngology.

Selected as one of five Americans to deliver papers to a group in London on International Medical Cooperation, **Alrick B. Hertzman**, M.D., St. Louis, presented a paper on "The Problem of Vasomotor Denervation." The symposium on peripheral circulation was sponsored by the Ciba Foundation.

The March-April issue of *The Bulletin of the National Society for Medical Research* leads off with an appealing article, "Animals and Orthopedic Surgery" by **J. Albert Key**, M.D., St. Louis.

"Etiology of Allergy" was the subject of a talk given by **Cecil M. Kohn**, M.D., Kansas City, at the American College of Allergists at a meeting in Chicago on April 21 to 28.

Among the first eleven men selected for promotion by the Navy since World War II is **Alphonse McMahon**, M.D., St. Louis. He was promoted from the rank of Commodore to Rear Admiral.

The fifth annual Cancer Seminar, sponsored by the Penrose Cancer Hospital and the College of American Pathologists, will be held at the Broadmoor Hotel, Colorado Springs, Colorado, on September 5. Paul C. Swenson, M.D., Philadelphia, and William A. Meissner, M.D., Boston, will jointly conduct this year's Cancer Seminar.

Guest speaker at a combined meeting of the Buchanan County Medical and Dental Societies on May 6 was **Norman Tobias**, M.D., St. Louis, who spoke on "Common Diseases of the Mouth."

Richard A. Sutter, M.D., St. Louis, is a newly appointed member of the advisory committee of the National Fund for Medical Education.

C. Souter Smith, M.D., Springfield, has added new laurels to her distinguished career as physician and citizen of our state. Dr. "Souter" was elected to the city council of Springfield as a member at large in the history making election held May 5. Springfieldians recently voted in the city manager form of government to replace their mayor-council system. Dr. Smith was chosen as Springfield's Woman of the Year for 1951. She is on the Council of the Greene County Medical Society, Chairman of the Committee on Conservation of Eyesight of the State Medical Association, member of the Missouri Committee of the National Society for the Prevention of Blindness, member of the board of trustees of Drury College, on the staff of Burge, St. John's and Springfield Baptist Hospitals, and a member of the board of directors at Springfield Baptist Hospital.

Recently elected members to various positions are **John A. Growdon**, M.D., Kansas City, secretary of Kansas City Blue Cross; **Frank L. Feierabend**, M.D., president, **Hubert M. Parker**, M.D., vice president, **Arch E. Spelman**, M.D., secretary, and **Dillard M. Eubank**, M.D., **Richard B. Schutz**, M.D., and **Jack W. Wolf**, M.D., of Kansas City Blue Shield; in Kansas City Academy of General Practice, **Jesse D. Rising**, M.D., president, **Hugh A. Gestring**, M.D., vice president, **Mary C. Cortner**, M.D., treasurer, **Richard R. Becker**, secretary, **Cecil G. Leitch**, M.D., and **Paul E. Pearson**, M.D., members of the executive committee; in Kansas City OORL Society, **William B. Berry**, M.D., president-elect, **William M. Scales**, M.D., vice president, **William R. Eubank**, M.D., secretary, and **Fred Bosilevac**, M.D., treasurer; in Kansas City Urological Society, **Stoughton F. White**, M.D., president, executive committee, **C. S. Capell**, M.D., **A. Lloyd Stockwell**, M.D., and **Hjalmar E. Carlson**, M.D.

IN MEMORIAM

Cunningham, Harvey L., M.D., Cape Girardeau, a graduate of Missouri Medical College, 1889; honor member of Cape Girardeau County Medical Society; aged 87; died April 26.

Griot, George A., M.D., Springfield, a graduate of St. Louis University School of Medicine, 1910; member of the Greene County Medical Society; aged 73; died April 29.

Sum, Othmar J., M.D., Barnhart, a graduate of St. Louis University School of Medicine, 1921; member of the Jefferson County Medical Society; aged 62; died May 1.

Cochran, J. Howard, M.D., Cape Girardeau, a graduate of Barnes Medical College, 1911; member of the Cape Girardeau County Medical Society; aged 64; died May 4.

Sandperl, Harry, M.D., St. Louis, a graduate of Washington University School of Medicine, 1908; member of the St. Louis Medical Society; aged 67; died May 10.

Gibson, Ora J., M.D., Cape Girardeau, a graduate of Washington University School of Medicine, 1933; member of the Cape Girardeau County Medical Society; aged 54; died May 20.

Engelbreit, Joseph J., M.D., St. Louis, a graduate of St. Louis University School of Medicine; junior member of the St. Louis Medical Society; aged 25; died May 21.

Rassieur, Louis, M.D., St. Louis, a graduate of Marion-Sims College of Medicine, 1899; honor member of the St. Louis Medical Society; aged 77; died May 28.

Walton, Josiah H., M.D., Clayton, a graduate of Barnes Medical College, 1902; honor member of the St. Louis County Medical Society; aged 79; died May 30.

Hardesty, John F., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1914; member of the St. Louis Medical Society; aged 66; died June 20.

NEW MEMBERS

Brennan, Patricia Anne, M.D., St. Louis
Cutts, F. William, M.D., Poplar Bluff
Dames, Richard J., M.D., St. Louis
Dankner, Arnold, M.D., St. Louis
Darnell, Thomas F. B., M.D., Columbia
Eller, Byron H., M.D., Bangkok, Thailand
Farr, A. L., M.D., St. Louis
Flatley, John A., M.D., Kansas City
Haddock, James N., M.D., St. Louis
Holman, H. Frank, M.D., Kansas City
Imes, Clifford H., M.D., Miller
Komanetsky, W. M., M.D., St. Louis
Michaelis, B. A., M.D., Frederickstown
Reineck, John A., M.D., St. Louis
Rifkin, Shale M., M.D., St. Louis
Roesler, Paul J., M.D., Farmington
Sawyers, Gordon E., M.D., Kansas City
Siesener, Herbert H., M.D., St. Louis
Tripodi, Donald W., M.D., Excelsior Springs
Van Matre, R. M., M.D., St. Louis
Wald, Stanley M., M.D., St. Louis

Legislation Affecting the Practice of Medicine

1953 Sessions of Missouri General Assembly

The 67th General Assembly adjourned *sine die* on May 31, 1953. An explanatory letter was sent to all members on June 22 calling attention to some of the more important legislation considered. Health legislation seemed to be the rule rather than the exception during this session.

The next session will not begin until January 1, 1955. This long interim should afford an opportunity to become acquainted with the members of the Assembly, Senate and House.

In the meantime, primary and general elections will be held in August and November of 1954. Members are urged to take an active interest in affairs of the bodies politic in order that the viewpoint of the profession may be understood before rather than after the elections.

A résumé of the legislation considered follows:

LEGISLATION PASSED

S.B. 375. Provides for exemptions from state income tax. Hereafter, *all* medical, dental, drug, nursing or hospital expenses paid by any person, (including amounts paid for health or accident insurance), are deductible from state income tax. If a single person, the maximum deduction shall be $2,500. If the taxpayer has one or more dependents, the maximum deduction shall be $5,000. (The law at present provides that such expenses in excess of 5 *per cent* of gross income are deductible.)

S.B. 237. Provides for performance of autopsies under certain conditions and outlines how consent for such procedures shall be obtained. (Endorsed by M.S.M.A.)

S.B. 165. Changes State Board of Nursing to include two practical nurses, also provides for licensing of all registered nurses and licensing of practical nurses on a voluntary basis. (Endorsed by M.S.M.A.)

H.B. 355. Provides for changes in commitment laws to state mental hospitals, including voluntary commitment procedures. (Endorsed by M.S.M.A.)

H.B. 82. Provides for new code for not for profit organizations on a permissive basis. Presently chartered organizations may comply with terms of new code only if they so wish. (Endorsed by M.S.M.A.)

H.B. 73. Provides that St. Louis County shall have right to levy a tax of 8c on $100 property valuation for public health purposes. (Endorsed by M.S.M.A.)

H.B. 317. Provides for salary increase of $600 per year for coroners of 2nd class counties (Buchanan, Greene, Jasper). S.B. 33, provided for same increase but included objectionable wording for coroner's duties. S.B. 33 was defeated.

S.B. 422. Provides for licensing, inspection and regulation of hospitals by the Division of Health. All hospitals providing for care or treatment for not less than 24 hours in any week of three or more nonrelated individuals suffering from illness, disease or injury, shall be included.

LEGISLATION DEFEATED

S.B. 392. Defined the practice of *Chiropractic* to be the art and science of palpating the spinal column; diagnosing, and the adjustment of the movable segments of the spinal column and tissues adjacent thereto by hand. It shall include the use of such supplementary measures as light, heat, electricity, cold, air, water, dietetics, rest and exercise. It shall not include the use of operative surgery, obstetrics, osteopathy, nor the administration or prescribing of any drug or medicine. (Opposed by M.S.M.A.) Died in Senate Committee on Public Health.

H.B. 276. Provided for the creation of a State Board of *Naturopathic* Examiners; defines Naturopathy as a system of diagnosis and treatment for the prevention, alleviation and correction of human ailments by use of natural methods consisting of physiotherapy, manual or mechanical manipulation, the proper use of diet, minerals, vitamins and other substances found in the human body to assist nature in resisting and overcoming human ailments, diseases and physical conditions. (Opposed by M.S.M.A.) Died in House Committee on Public Health.

H.B. 454. *Naturopathy* is defined as natural healing science utilizing only specific substances of the same organism or organ and of related species that can bring about a natural reaction. (Opposed by M.S.M.A.) Died in House Committee on Public Health.

H.B. 449. *Naturopathy* is defined as a system of diagnosis and treatment by the use of natural methods consisting of air, light, heat, water, electricity, manual manipulation, the proper use of diet, minerals, vitamins and other substances found in and required by the human body. (Opposed by M.S.M.A.) Was passed out of Committee but was stricken from Calendar in House following adoption of amendment, changing Board of Examiners in Naturopathy to 5 duly licensed Doctors of Medicine.

S.B. 69. Provided that non-profit Blue Cross and Blue Shield Plans shall be under jurisdiction of State Insurance Department. (Opposed by M.S.M.A.) Died in Senate Committee on Public Health.

S.B. 229. This bill provided that non-profit Blue Cross and Blue Shield Plans shall be under jurisdiction of State Insurance Department. Similar to S.B. 69. Died in Senate Committee on Public Health.

S.B. 343. This bill provided that the course in schools of Chiropractic shall cover a period of not less than four years of nine months each. Defeated on Floor of Senate.

H.B. 175. Provided for changes in Workmens Compensation Act so that individuals or firms with five or more employees would be subject to terms of act (present law is 10 or more employees). Would have affected all physicians with 5 or more employees. Defeated in House on Final Passage.

H.B. 184. Provided for changes in Workmens Compensation Act so that injured employee would have free choice of physician. Died in House Committee on Workmens Compensation.

H.B. 108. Provided that any person entitled to old age assistance, who required treatment according to certification of a licensed physician, osteopath, chiropractor or Christian Science Practitioner, would receive in addition to usual pension, a sum up to $100 per month, if such person is confined to a hospital or nursing, rest or boarding home. Died in Committee.

H.B. 109. Licensing Act for nursing, rest or boarding homes. Passed House, and was amended in Senate to eliminate agencies operated by religious or fraternal groups. Session closed before House had opportunity to consider Senate Amendments.

S.B. 224. Provided for injunction against those practicing a profession without a license. (Endorsed by M.S.M.A.) Died in Senate Committee on Judiciary.

S.B. 264. Blood Tests to determine paternity. Passed Senate—Died on House Final Passage Calendar.

S.B. 423. Provided for study of laws dealing with persons licensed to practice a profession, including medicine, osteopathy, chiropractics, etc., and a study of the schools teaching the various persons so licensed. (Endorsed by M.S.M.A.) Died in Senate Committee on Public Health.

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Clay County Medical Society

The Clay County Medical Society met in regular session at St. Luke's Episcopal Church, Excelsior Springs, Missouri, on Tuesday, May 26. Dinner was served to the Society and the Auxiliary. Eighteen members and wives were present.

After the dinner hour, the Auxiliary adjourned to the home of Dr. and Mrs. David E. Musgrave for their meeting. The business meeting and scientific program of the Society was held in the undercroft of the church.

Drs. **S. O. Schroeder, Glenn Hendren** and **W. H. Goodson** of Liberty were responsible for the scientific program. They presented a movie on "Angina Pectoris."

S. R. McCRACKEN, M.D., *Secretary*

Grand River Medical Society

June 11 was a big day for the Grand River Medical Society. In the afternoon the society held its annual golf tournament at the Chillicothe Country Club. The evening session was held at the Strand Hotel beginning with dinner at 6:30 p.m. Following dinner a trophy and appropriate prizes were presented to the winners of the afternoon golfing classic. Dr. C. L. Clark of Trenton was awarded the trophy for his number 1 winning play. Druggist guests participated in the golf contest and were present at the evening session. Dr. James Janney, Jr., St. Louis, Missouri, gave the scientific program with an interesting and practical talk on "Medical Emergencies."

E. A. DUFFY, M.D., *Secretary.*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

"What's New in Obstetrics" was the subject discussed by Dr. **Arthur L. Haskins,** Washington Uni-

versity School of Medicine, St. Louis, at a meeting of the Chariton-Macon-Monroe-Randolph Medical Society, Woodland Hospital, Moberly, on May 14, 1953. This interesting program was well received by those who were fortunate enough to be present.

C. C. Cohrs, M.D., *Secretary*

Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held at the Mark Twain Hotel, Hannibal, Thursday night, May 28. All members of the Second Councilor District of the Missouri State Medical Association were invited.

The scientific program of the evening was presented by **Joseph L. Lucido**, M.D., Department of Surgery, St. Louis University Medical School. He discussed "The Diagnosis and Treatment of Traumatic Injuries to the Chest."

Robert J. Lanning, M.D., *Secretary*

FIFTH COUNCILOR DISTRICT

J. LOREN WASHBURN, VERSAILLES, COUNCILOR

Audrain County Medical Society

John D. Morrow, M.D., Washington University Medical School, St. Louis, spoke at the Audrain County Medical Society meeting on Thursday night, May 21. His subject was "New Drugs in the Treatment of Hypertension." The meeting began with a dinner at the Mexico Country Club through the courtesy of Dr. **Frank Jolley** and then moved to the Audrain County Hospital for the scientific program.

Harry F. O'Brien, M.D., *Secretary*

SIXTH COUNCILOR DISTRICT

C. G. STAUFFACHER, SEDALIA, COUNCILOR

Pettis County Medical Society

A joint meeting of Henry, Pettis and Saline County Medical Societies was held at the Bothwell Hospital in Sedalia, Thursday night, May 28. The purpose of the meeting was to consider further the idea of hyphenating the three societies. A temporary organization of the societies was set up with Dr. **Ray Hollingsworth**, Clinton, Chairman, and Dr. **Carl Siegel**, Sedalia, Secretary. Each of the three societies is to appoint two of its members to a committee charged with the responsibility of drawing up a constitution and by-laws for approval by all concerned. This committee will function under the direction of the temporary chairman and will report its recommendations to another joint meeting of the three societies later this summer. Dr. **C. G. Stauffacher**, Sedalia, Mo., Councilor, presided over the organizational discussion.

Carl D. Siegel, M.D., *Secretary*

Joint Meeting of Henry, Pettis, Saline Societies

Members of the Henry, Pettis and Saline County Medical Societies met at the Bothwell Hospital, Sedalia, Tuesday night, June 30 and voted to postpone formal hyphenation until later. In the meantime it was decided to hold joint scientific programs of the three societies beginning this fall. It was felt that some addition to the present constitution and by-laws of the State Association might well be made next year relating to hyphenations so that some autonomy for each County in a hyphenation may be preserved for handling purely local problems. The first joint scientific meeting will be held September 15 at the Bothwell Hospital, Sedalia, Missouri.

Carl Siegel, M.D., *Secretary, of the Joint Group.*

West Central Missouri County Medical Society

On Thursday night, June 25, at Butler, a new hyphenated county medical society came into official status. Approval by the Council and House of Delegates for the formation of Bates, Cass, Cedar, St. Clair and Vernon Counties into a hyphenated society was given at the April State Association meeting in Kansas City. On June 25 the Five County group adopted a local constitution and by-laws and elected officers. President of the new West Central Missouri County Medical Society is Roy Pearse, Jr., M.D., Nevada; Vice President, Carter Luter, M.D., Butler; Secretary-Treasurer, O. B. Barger, Harrisonville. Dr. C. G. Stauffacher, Sedalia, Councilor, presided at the organizational phase of the meeting. Ray McIntyre, Field Secretary, Missouri State Medical Association, was also present. Twenty members of the new society were in attendance.

O. B. Barger, M.D., *Secretary.*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski-Maries County Medical Society

Dr. **Francis J. Burns**, St. Louis, presented the scientific program at the May 28 dinner meeting of the Phelps-Crawford-Dent-Pulaski-Maries County Medical Society at Rolla. He discussed "The Diagnosis and Treatment of Common Rectal Diseases."

M. K. Underwood, M.D., *Secretary*

South Central Counties Medical Society

The South Central Counties Medical Society met for dinner at the Sunset Club near Cabool on June 17 with the following members and visitors and several wives present: Drs. R. W. Denney and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; S. G. Kramer, Houston; Leslie Randall, Licking; M. B. Perkins, Willow Springs; E. C. Bohrer and J. M. Wiles, West Plains; C. W. Cooper, Thayer; Roland Langston and Edgar Dimond, Springfield.

After dinner the ladies went to the home of Mrs. Garrett Hogg for the evening and the doctors went to the office of Dr. Hogg where the president, Dr. Kramer, called the meeting to order.

Dr. Langston spoke and showed films on "Gallbladder Disease" and Dr. Dimond spoke on "Glaucoma."

Dr. Kramer expressed the thanks of the Society to the speakers.

The minutes of the last meeting were read and approved and following discussion the meeting adjourned for a picnic on July 16 at Dr. Cooper's cabin

Announcing a scientifical in cigarette smoking.

KENT with the exclusive "MICRONITE" FILTER

DOCTORS have long been aware of the need for a really effective filter-tipped cigarette. P. Lorillard Company has been conscious of this problem, and after years of study, experiment and research believes it has developed a cigarette that meets the need.

It is the new KENT cigarette with the "Micronite"* Filter. Recent tests have shown that the Micronite Filter *approaches 7 times the efficiency of other filters in the removal of tars and nicotine* and is virtually twice as effective as the next most efficient cigarette.

All members of the medical profession will be interested in the facts about this new cigarette. To avoid possible confusion or misunderstanding by the general public, the details of the KENT studies given on these pages are for physicians only and will not appear in KENT advertising or promotion to the general public.

Micronite as a cigarette filter . . .

The new filter material—called Micronite—stems directly from the improved protective filters developed to meet critical air-purification problems in atomic energy plants.

When investigations showed that this filter medium was capable of removing all of the minute particles from a stream of cigarette smoke, the filter was modified for use in KENT cigarettes. *This was done in such a way as to permit the passage of pleasant aromatic smoke constituents, but with a removal of the more objectionable fractions of tobacco smoke to an extent never before accomplished.*

Efficacy of the Micronite Filter

The normal human subjects used in testing the Micronite Filter were divided into two categories—*susceptible and non-susceptible*—on the basis of their subjective reactions to cigarette smoking. Approximately two-thirds of the subjects *in this investigation* were *non-susceptible* while the remaining third were definit *susceptible.* Other investigations have reported a sor what similar ratio. (a)

To study the effects of this filter on physiologi reactions to cigarette smoke, in both *susceptible* a *non-susceptible persons,* two different tests were e ployed, both being measurements of peripheral bl flow.

The first test involves the drop in skin temperat occurring at the finger tip, induced by smoking a measured according to *well-established procedures.* (b

The second test is a measurement of vasoconstrict in the hand, as recorded plethysmographically. (d)

The results of these measurements—determined Lorillard by an independent research organizatior are shown on the four charts reproduced here. C currently, other outside independent laboratories carrying on further research on the chemical and ph iological effects of cigarette smoking *with new and or inal testing methods.*

From these charts, the following general conclusi may be drawn:

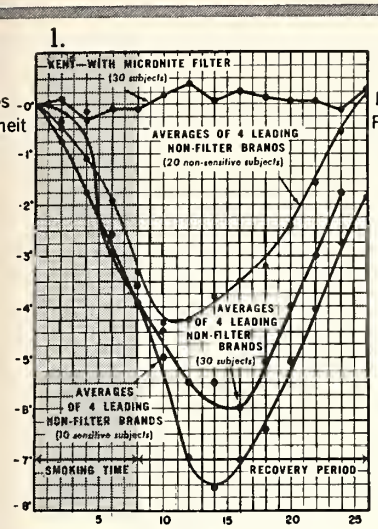
> **When cigarette smoke is drawn through a Micron Filter, it is no longer capable of producing charact istic changes in peripheral blood flow in either s ceptible or non-susceptible persons.**
>
> **The Micronite Filter is vastly superior to *any ot available filter now in use* for removing tars a nicotine in cigarette smoke.**

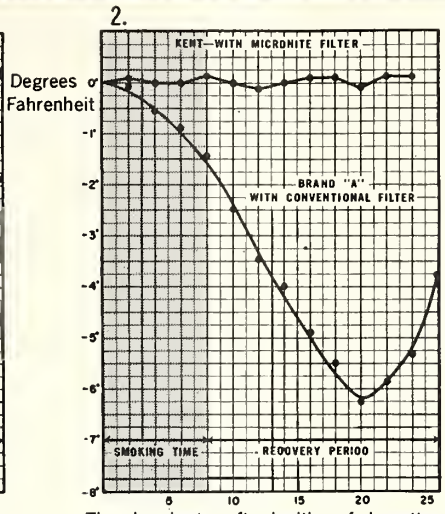
Here are additional observations from work now progress:

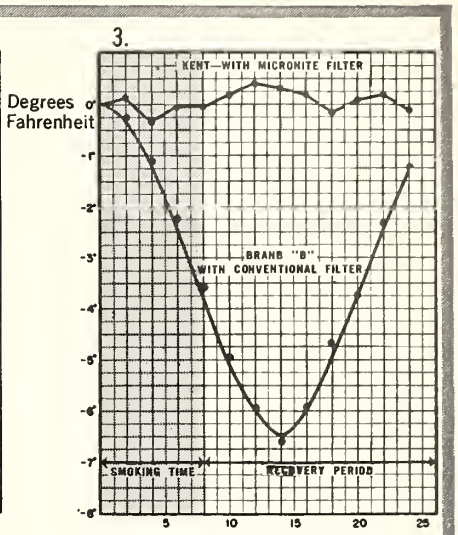
1. When smoke which has passed through a Mic nite Filter contacts the conjunctival sac of the rabl far less irritation occurs than when the sac is expo to the smoke from regular cigarettes or the smoke fr popular filter-tipped brands.

2. Current studies also indicate that Micronite tered smoke is less irritating to mucous membra

gnificant development





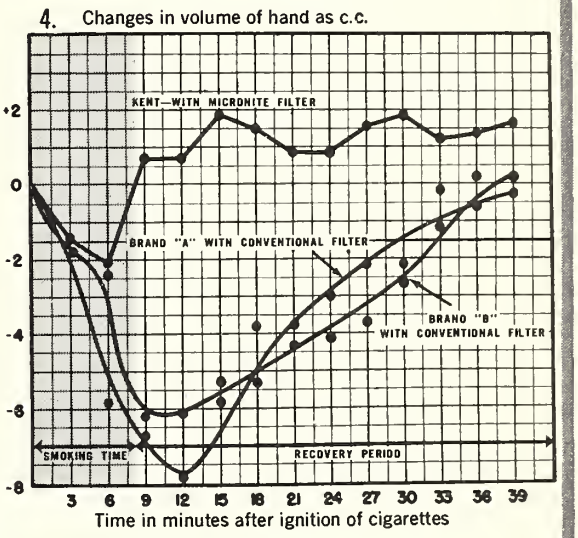


ART 1. Comparison of KENT with leading non-filter brands. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette.

ART 2. Comparison of KENT with Brand "A" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

ART 3. Comparison of KENT with Brand "B" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

ART 4. Comparison of KENT with Brand "A" and "B" conventional filter tip. Peripheral vasoconstriction induced by smoking one cigarette. Peripheral blood flow as measured by continuous plethysmography on the hand. Average for 4 susceptible and 8 non-susceptible subjects.



an unfiltered smoke.

When the scientific evidence of the effectiveness of e Micronite Filter is compared *with* the effectiveness other filters, *it shows that*—

The problem of smoker susceptibility to tobacco irritants may be largely overcome by KENTs. And for those people whose smoking should be restricted for therapeutic reasons, *KENTs should be considered* as the cigarette of choice.

*PATENT APPLIED FOR

References Cited

A Manual of Pharmacology, 7th edition, Philadelphia, W. B. Saunders Co., 1949, pp. 341-352.
J.A.M.A., Vol. 103, 1934, p. 318.
J.A.M.A., Vol. 135, 1947, p. 417.
J.A.M.A., Vol. 104, 1935, p. 1963.

on Spring River, just over the Arkansas line below Mammoth Spring.

A. C. AMES, M.D., *Secretary*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Butler-Ripley-Wayne County Medical Society

On Wednesday night, June 3, at the Dunn Hotel, Poplar Bluff, the birth of the Butler-Ripley-Wayne County Medical Society was consummated. Dr. **Frank Hall**, Cape Girardeau, Councilor, presided at the organizational part of the session. Dr. **W. E. Henrickson**, Poplar Bluff, was elected President, Dr. **Norman E. Willis**, Poplar Bluff, was elected Vice-President and Dr. **Robert Engelhardt**, Poplar Bluff, was elected Secretary-Treasurer of the new Society. **A. H. Conrad**, Jr., M.D., St. Louis, gave the scientific presentation of the evening. He discussed "The Diagnosis and Treatment of Some Common Skin Diseases." Twenty-five physicians were in attendance.

ROBERT ENGELHARDT, M.D., *Secretary*

Mineral Area County Medical Society

The May meeting of the Mineral Area County Medical Society was held at the State Hospital in Farmington on Thursday night, May 28.

Dr. **Willard Bartlett**, St. Louis, spoke on "Fact and Fallacy in the Management of Toxic Goiter." The Woman's Auxiliary to the Society held a concurrent meeting.

BYRON H. TAYLOR, JR., M.D., *Secretary*

Tenth Councilor District Meeting

Some thirty-five doctors braved the torrid heat to attend a meeting of the Tenth Councilor District Thursday afternoon and evening, June 18, at State Hospital No. 4, Farmington.

The scientific program was sponsored by the Missouri Academy of General Practice. The program was as follows:

3:30 p.m. James F. Dowd, M.D., Department of Surgery, St. Louis University Medical School, "The Treatment of Common Injuries Resulting From Automobile Accidents."

4.30 p.m. Joseph C. Edwards, M.D., Department of Internal Medicine, Washington University Medical School, "Medical Emergencies."

5:30-6:30 p.m. Social Hour—Mineral Area County Society host.

7:00 p.m. Complimentary Dinner.

8:00 p.m. James W. Colbert, Jr., M.D., Dean, St. Louis University School of Medicine, "Newer Concepts in the Management of Viral Hepatitis."

E. C. Bohrer, M.D., President, Missouri State Medical Association, "Where to From Here?"

FRANK W. HALL, M.D., *Councilor.*

Of This and That

MARK M. MARKS, M.D.

Over 800 years ago, Maimonides, court physician to the Caliph, in his daily prayers said, "May there never develop in me the notion that my education is complete, but give me strength, leisure and zeal continually to enlarge my knowledge."

This ancient turbaned healer, as well as his modern counterpart with stethoscope and scalpel, knew that the relentless search for truth lies in those curious minds that probe the darkness of the unknown.

At medical meetings and in writings do some find voice to show a few rays of discovered facts. The pursuit of knowledge is the inherent gift of learning that has no end.

A few weeks ago, Brotherhood Week was called to our attention. To those who care not for its significance, it was only another set of consecutive seven days. To many others it was a time for respectful remembrance of the spirit that created this nation.

We do need reminding that the inception of these United States was nurtured in the mind and heart of diverse minority groups. The combined dreams, sweat and tears of these people varied in speech, custom and thought welded a handful of isolated colonies into a nation that has become the brightest spot in a fear and hunger-ridden world.

In the strength of its heterogenecy lies the deep rooted love of peace, jealousy of its unlimited promise and the will to build for itself a way of life that, with all its faults, demonstrates the meaning of brotherhood.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, every Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

Letters to Missouri Medicine

Geriatrics

To the Editor:

It is gratifying to read the many articles appearing in the lay and medical literature on the doctor shortage. Let me help in keeping the profession interested in this big problem in Missouri. I foresee no improvement in the near future to this distressing condition. Our old doctors are dying and for three decades replacement of their work by young physicians has been insufficient.

A recent study by John H. Lane, Jr., published by the Agricultural Department of the University of Missouri and entitled, "What Has Happened to the Country Doctor?" is comprehensive and excellent. His illustrations (page 8) reveals the decline succintly. The pictures on pages 10 and 11, comical as they are, undoubtedly will impress our legislators more than a row of figures. I believe that Professor Lane's pamphlet should be generally distributed. Some of his conclusions will be recalled in another letter.

Here I want to magnify the importance of geriatrics as a basic study for the rural doctor.

So many old people in Crawford County! Our young folks emigrate to the large cities; some of them accumulate some funds and then retire to their boyhood home. They can live cheaper in the country. One or two acres with a neat cottage is alluring; some chickens, a pig and even a cow may be kept. A garden for potatoes and vegetables is a necessity. Down goes the high cost of food stuff!

This is why so many city folks retire to the country, and the consequence is that the diseases of senility are the chief complaints in rural communities. An occasional visit to a specialist in the metropolitan area or a short sojourn in a hospital is a rational procedure for the patient, but most of his time he resides at home.

True, gerontology is still an imperfect science. As a text let us look at the death rate of the so-called cardiovascular diseases, which are most prevalent in old age. Formerly, pneumonia held first place, but the modern treatment has pushed its death rate downward.

These statistical data are taken entirely from the Third Annual Report of the Division of Health (July 1948 to July 1949). I will select six adjoining counties from Southern Missouri. The compilation is limited to the deaths from (1) intracranial lesions of vascular origin; (2) diseases of the heart and (3) other diseases of the circulatory system. The counties selected were Dent, Texas, Shannon, Howell, Douglass and Oregon; average death rate from cardiovascular diseases (per hundred thousand), 407. Compare this with St. Louis and Kansas City, average death rate 540; the state 497.

However, this does not tell the whole story, for as already stated, so many old men who were reared in the country, but spent their active years in the city, end their final weeks in rural surroundings and the resident deaths are proportionately increased. So I have gotten the impression that cardiovascular diseases are best treated in the country. (Let someone show that my straw vote is erroneous.)

We come back to our first affirmation. The doctor in rural communities will be judged not only by his obstetrics but also by his knowledge of geriatrics and pediatrics.

The women prefer the hospital in which to have their babies. Statistics show that their choice is advantageous, but, as in the home or office, it is the doctor and not the hospital who is the decisive factor. We need young men well trained in obstetrics and geriatric procedure to take charge of rural communities. Our old people suffering for years with the complex ailments of senescence need good general practitioners and occasionally a specialist.

JOHN ZAHORSKY, M.D., STEELVILLE, MO.

P. S. The latest figures from the state are: Death rate from diseases of the heart and intracranial vascular lesions, 531. The rural physician cannot lessen this high mortality but can he not prolong the final years in peace and comfort? I think he can.

Low Forceps

April 28, 1953

Dear Editor:

I am puzzled about the item, "Low Forceps," by Robert Lamar, M.D., on page 380 of the May MISSOURI MEDICINE. It is apparently written to be light and funny, but sounds like the immature mouthings of the Junior High Scream sheet. Surely he must know that the retinal changes secondary to gynecological diseases alone would require a book for complete description. Examination of the patient for gynecological purposes should include ophthalmoscopy, visual acuity and visual fields.

Wit and humor have a place in MISSOURI MEDICINE, but not abysmal ignorance, please.

Yours,
PAUL W. MILES, M.D.,
Assistant Professor of Ophthalmology
Washington University School of Medicine.

REPLY BY ROBERT LAMAR, M.D.

It is with mixed emotions that we discover in the Letters to the Editor section that this column has doubled its audience, Dr. Paul Miles, a Professor of Ophthalmology, having joined Mother in avidly perusing the cast pearls, although the reactions vary considerably.

The gynecologist, (who doesn't take out tonsils either), has long felt a certain security and *gemutlichkeit* in his worm's eye view of human suffering. To find that some would so much as allow him to look above the umbilicus shakes the very foundations of established medical conservatism. And what hurts more, here is an ophthalmologist who, one might say, objects to our vitreous humor.

Scotomata can exist in fields other than retinal, although references to puerility, (a puerile word, incidentally), smack more of hysterical blindness. In fact, we haven't seen an ophthalmologist quite so excited since the courts almost ruled "wrong" on the Lilly case.

ROBERT LAMAR, M.D.

Woman's Auxiliary

St. Joseph, Mo.

To the Editor:

While writing this report last week, my husband

"snooped" over my shoulder. He was quite surprised at how active the "wives" are here, and suggested that I send you a copy.

Our membership is eighty-six and, incidentally, we are larger than the County Society by five members—due to some widows who have remained active.

We are all busy and, still, I do not think we neglect our "doctor husbands." Don't you think they all look "well cared for"?

Yours sincerely,
MRS. EULALIA PETERSEN

(see: Report of Hospitality Chairman, below)

REPORT OF HOSPITALITY CHAIRMAN

The Hospitality Chairman of the Woman's Auxiliary to the Buchanan County Medical Society submits the following report for the year 1952-1953.

A telephone survey was made of the entire membership to determine the various organizations in which our members are actively participating. It was both interesting and gratifying to find that our members are taking part in fifty-two cultural and social service organization.

Churches, Parent-Teachers and two hospital women's associations headed the list for the largest number of women working.

Following is a list of the organizations: Community Chest, Fortnightly, Churches, P. E. O., Heart Clinic, Womans Association of the Missouri Methodist Hospital, Daughters of the American Revolution, Art League, United Daughters of the Confederacy, St. Joseph's Hospital Guild, Parent Teachers Association, Runcie Club, Y. W. C. A., Tuberculosis Society, Press Club, Girl Scouts, Muchenberger Recreation Center, Children's Theatre, Red Cross, Child Guidance Center, Council of Social Agencies, Y. M. C. A., Woman's Auxiliary to the Missouri State Medical Association, Opti-Mrs., Lioness, Council of Exceptional Children, Mental Hygiene Society, League of Women Voters, American Legion Auxiliary, Missouri State Physical Therapy Association, Womens Chamber of Commerce, Humane Society, Garden Club, Family and Childrens Bureau, Flower Society, American Association of University Women, Office of Civil Defense, Cancer Society, Boy Scouts, Welfare Board Clinic, Newcomers Club, Rosarians, School Nursing, Young Matrons Club, Crippled Children's Society, St. Joseph School Board, Missouri State Board of Education, Organization of Public Health Nursing, American Association of Nurse Anesthetists, Hadassah, B'Nai B'Rith, Junior League.

Thoughts on Therapy

CHARLES C. DENNIE, M.D.

Concerning Penicillin

Much has been written in medical journals and in the lay press concerning the increasing inefficiency of the antibiotics, especially penicillin, in the treatment of acute infectious diseases caused by the Streptococcus and Staphylococcus aureus hemolyticus, and other diseases produced by the various cocci. These sources assert that the sensitivity of these organisms is decreasing in certain strains as the antibiotics are used again and again in the treatment of the diseases caused by these bacteria. There is no doubt, in certain instances in which the disease recurs time after time and is caused by the same strain of organisms, that specific bacteria do lose their sensitivity to the antibiotic. Thus it is assumed that as time goes on we will develop a mutated race of bacteria which are absolutely insensitive to any of the antibiotics. I will attempt to refute this argument.

Resistant strains of bacteria have existed before and during the first use of the antibiotics. Early in the era of the wonder drug utilization, certain diseases caused by the cocci did not respond to any dosage of penicillin. These were noted by me in patients in the University of Kansas Hospital and in private practice. Evidently the strains that were extremely sensitive to penicillin have almost entirely disappeared and the ones that always were resistant have increased by propagation until larger numbers of patients are infected by the resistant form in which penicillin never was of any use. Certainly the organisms of syphilis lose but little sensitivity when they come in contact with penicillin. A few cases of syphilis have occurred in which the Spirochaeta pallida was absolutely insensitive to penicillin and the disease continued to increase its severity. The particular case that I cite was a boy of 19 years who acquired a primary lesion and was given three months treatment of adequate doses of penicillin, Mepharsen and bismuth. He became moribund, developed discharging lymph nodes in his groin and a large hard mass in his right quadrant which was of such severity that he could not stand upright. He ran a daily temperature of 102 F. and a white blood count of between 18,000 and 20,000. All of the venereal diseases were considered but all of the tests such as the Frei, Dmelcos, the Donovan bodies, were negative. The only positive finding was the high titer Wassermann and Kahn reactions. Here was a boy who had not responded to any of the modern treatment. In keeping with our thought we believed that the patient had no resistance to his disease. He was given four heat cabinet treatments in which his temperature was raised to 106 F. for four to six hours during each bout. Daily injections of 600,000 units of penicillin were given. At the end of that time he was able to walk upright, his fever had disappeared and his blood count became practically normal. For a year and a half he was treated with penicillin, 6,000,000 units during each course for two courses. His spinal fluid and blood show negative reactions and there is no evidence of disease. This case is cited as evidence to confirm the statement I am about to make. All diseases treated by antibiotics must be considered in the following manner: It is not merely a lethal reaction upon the bacteria produced by the specific antibiotic but the resistive forces of the host also must enter into this combination in order

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

City View Sanitarium

Established 1907

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

NASHVILLE, TENNESSEE

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

THE MARY POGUE SCHOOL

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request

G. H. Marquardt, M.D.
Medical Director

Barclay J. MacGregor
Registrar

27 Geneva Road, Wheaton, Illinois (Near Chicago)

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

Rx Zemmer

PHARMACEUTICALS

A complete line of laboratory controlled ethical pharmaceuticals. Chemists to the Medical Profession since 1903. Mo. 8-53

THE ZEMMER COMPANY, Pittsburgh 13, Pennsylvania

that the disease be cured. Such was the case of the boy with syphilis.

There is no indication up to the present time that the Spirochaeta pallida is acquiring a nonsensitivity to penicillin. It seems to be as effective in the treatment of all types of syphilis as it was in the beginning, even more so. Those who are resistant to penicillin have been so from the start. It is not likely that neurosyphilis in any great amount will make its appearance as a sequel to penicillin treatment. In the old days when this occurred, it occurred as a rule within five years after treatment was instituted. Spinal fluid examination confirmed its appearance. The appearance of positive reactions in the spinal fluids in treated early cases is negligible under present day treatment.

In several cases of infection with the hemolytic Staphylococcus aureus in various parts of the body which did not respond to the antibiotics, fresh blood transfusions have turned the trick. In one case of infection of the face the sensitivity test was done with all of the antibiotics used at present, penicillin, Aureomycin, Terramycin, Ilotycin, Streptomycin and Chloromycetin, as well as some of the antibiotics used only locally. The organism was sensitive only to Chloromycetin. We have found this true in more than one case. The disease responded with the administration of Chloromycetin over a period of two weeks and then recurred almost as bad as it was before. Sensitivity tests done again showed that it was insensitive to all the antibiotics excepting Chloromycetin and that sensitivity had been reduced to 50 per cent. It was considered that the patient had no natural resistance to the organism and therefore part of the triangle of host, parasite and antibiotic was lacking. Fresh blood transfusions produced remarkable results within ten days time. The patient still has an occasional lesion but that is controlled by local applications. In the treatment of all diseases of bacterial origin in which transfusions are indicated, nothing but fresh blood transfusions should be used because they contain many antibodies, amboceptors, enzymes and complement which die upon any considerable time storage of blood. Banked blood or plasma should never be used. The latter is an efficient method when used in controlling shock in surgical operations and is the instrument of quick action upon the field of battle or in desperate surgical cases. Its value lies only in preventing shock and the collapse of the vascular system. As far as it conferring any great amount of immunological protection to the patient one must concede that it is not much.

As a final word, it must then be conceded that infectious organisms as a whole are not acquiring too much insensitivity to the antibiotics. Rather, one is inclined to believe that the sensitive organisms are all being killed out, leaving only the insensitive ones which propagate their disease and are uncontrollable by any of the antibiotics. In the latter case we will have to search for new antibiotics that are destructive to these organisms, and I firmly believe they will be found, but while searching for these new wonder drugs let us not forget the holy triple alliance, the host, the parasite and the antibiotic.

NEW AUTOPSY BILL PASSED

Senate Bill No. 237, dealing with autopsies, passed the House and Senate and will become a law on August 27. Following is the text of the bill:

To prohibit the performance of autopsies except in certain cases, to permit the performance of autopsies in certain cases, and to provide penalties for the violation of this act.

Section 1. It shall be unlawful for any licensed physician and surgeon to perform an autopsy or post-mortem examination upon the remains of any person without the consent of one of the following:

(1) The deceased, if in writing, and duly signed and acknowledged prior to his death; or

(2) The surviving spouse; or

(3) If the surviving spouse through injury, illness or mental incapacity is incapable of giving his or her consent, or if the surviving spouse is unknown, or his or her address unknown or beyond the boundaries of the United States, or if he or she has been separated and living apart from the deceased, or if there is no surviving spouse, then any surviving child, parent, brother or sister, in the order named; or

(4) If no surviving child, parent, brother or sister can be contacted by telephone or telegraph, then any other relative, by blood or marriage; or

(5) If there are no relatives who assume the right to control the disposition of the remains, then any person, friend or friends who assume such responsibility.

2. If the surviving spouse, child, parent, brother or sister hereinabove mentioned is under the age of twenty-one years, but over the age of sixteen years, such minor shall be deemed of age for the purpose of granting the consent hereinabove required.

3. Any licensed physician and surgeon performing an autopsy or post-mortem examination with the consent of any of the persons enumerated in subsection 1 of this section shall use his judgment as to the scope and extent to be performed, and shall be in no way liable for such action.

4. It shall be unlawful for any licensed physician, unless specifically authorized by law, to hold a post-mortem examination on any unclaimed dead without the consent required by Section 194.170, RSMo 1949.

5. Any person not a licensed physician performing an autopsy or any licensed physician performing an autopsy without the authorization herein required shall upon conviction be adjudged guilty of a misdemeanor, and subject to the penalty provided for in Section 194.180, RSMo 1949.

THE COUNCIL

The Council met at the Sheraton Hotel, St. Louis, on June 27 and 28, with Victor B. Buhler, M.D., Kansas City, Chairman, and W. S. Sewell, M.D., Springfield, Vice Chairman, presiding. Those present were Drs. Buhler, Sewell, Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; Raymond O. Muether, St. Louis; Otto W. Koch, Clayton; J. Loren Washburn, Versailles; C. G. Stauffacher, Sedalia; J. H. Summers, Lebanon; Frank W. Hall, Cape Girardeau; E. Claude Bohrer, West Plains; E. Royce Bohrer, Jefferson City; Carl F. Vohs, St. Louis; H. E. Petersen, St. Joseph; Paul Baldwin, Kennett; Rolla B. Wray, Nevada; A. S. Bristow, Princeton; Henry Allen, St. Louis; James R. McVay, Kansas City; Messrs. John H. Noble, Kennett; W. H. Bartleson, Kansas City; Lemoine Skinner, James Koenig, Raymond McIntyre and T. R. O'Brien, St. Louis.

Conference on Patient Care

A request from the Conference for Improvement of

Patient Care was presented that the amount furnished by the Association be raised from $100 to $200 annually. On motion of Dr. Sewell, this was approved.

Thank You Notes

Notes were read from Dr. Hyndman thanking the Council for flowers at the time of Mrs. Hyndman's death; also a note from the Physiotherapists thanking the Association for its help in their annual session. An acknowledgement of the receipt of $500 by the Missouri Health Council for the study of indigent care was read.

A.M.E.F.

Mr. O'Brien reported twenty-nine checks received and fourteen pledges made from Missouri physicians for A.M.E.F., also $140 received from the Woman's Auxiliary.

Treasurer's Report

The Treasurer presented the financial report for the Association, which on motion was accepted.

Audrain County Hospital Suit

The bill for the legal help in the Audrain County Hospital suit in which the Association was a co-defendant was presented. On motion of Dr. Petersen, it was ordered paid out of current funds.

Community Health League

The history and purposes of the Community Health League and its current financial situation were discussed. On motion of Dr. Francka, it was voted that the Missouri State Medical Association assist the Community Health League financially as necessary until the time of the next meeting of the House of Delegates.

Future Activities

The following special committee to study legislative problems with certain aspects to be handled by the various standing committees involved was suggested, the committee to be empowered to study all aspects of licensure in the healing art field in Missouri: A. E. Spelman, M.D., Smithville, Chairman, Committee on Rural Health; Wilson J. Ferguson, M.D., Sikeston, Chairman, Committee on Medical Education and Hospitals; Sedgwick Mead, M.D., St. Louis, Chairman, Committee on Physical Medicine; W. F. Francka, M.D., Hannibal, Chairman, Committee on Public Policy and Public Relations; Avery P. Rowlette, M.D., Moberly, Chairman, Committee on Medical Economics; E. C. Bohrer, M.D., West Plains; H. E. Petersen, M.D., St. Joseph; E. Royce Bohrer, M.D., Jefferson City; Victor B. Buhler, M.D., Kansas City; Carl F. Vohs, M.D., St. Louis.

On motion of Dr. Hall, the Council voted approval of the committee and its purposes.

Attorney Retained

After discussion, on motion of Dr. Muether, it was voted that the Executive Secretary be empowered to retain an attorney on an annual basis.

Attorney for Committee

On motion of Dr. Muether, it was voted that the Special Committee, just approved, be empowered to secure legal help as is necessary.

Field Secretary's Report

Mr. McIntyre reported on the meeting of the Missouri Health Council on May 4 and said that the study of indigent care in Missouri had begun. He reported on several special society meetings. He also reported several special events, as the "Dr. Hawkins' Day" at Salisbury. He reviewed the recent hyphenations of societies, which have been approved by the Council. Upon request that the Council decide at this time if the Association have an exhibit at the Missouri State Fair, on motion of Dr. Sewell, it was decided to do so. Mr. McIntyre reported that ten physicians had recently located in rural communities in Missouri. A discussion of new county hospitals in the state followed the report.

1954 Annual Session

Mr. O'Brien presented the following suggested outline for the 1954 Annual Session, prompted by the resolution presented in the 1953 session, which was not adopted but which showed dissatisfaction with the business sessions interfering with the scientific sessions:

Sunday—House of Delegates—10:30 a.m.
  Reference Committee—(4:00 p.m.-6:00 p.m.)
  Meetings—(after 8:00 p.m.)
Monday—Scientific Sessions—9:00 a.m.-4:00 p.m.
  Round Table Luncheon—12:00 noon.
  House of Delegates—4:00 p.m.
  Reference Committees—8:00 p.m.
  Any other Association Committees—*6:00 p.m. on.*
Tuesday—Scientific Sessions—9:00 a.m.-5:00 p.m.
  Round Table Luncheon—12:00 noon.
  Banquet—7:30 p.m.
Wednesday—Scientific Sessions—9:00 a.m.-12:00 noon.
  Missouri University Alumni—12:00 noon.
  House of Delegates—1:30 p.m.
Council Meetings—two weeks prior to Annual Session. Saturday night preceding the opening of Annual Session; and Monday night at same time of Reference Committee meetings.

Next Council Meeting

It was announced that Dr. Summers had made arrangements for the Council to meet at Bennett Springs Park on September 26 and 27.

Doctor Draft Law

A resolution submitted by the Jackson County Medical Society regarding the Doctor Draft Law in the House of Delegates at the last Annual Session was referred to the Council for implementation. The resolution was not suitable in a few respects to some of the delegates and the Council was asked to attempt to work out these differences and to then notify the Congress of the opinion of the Missouri medical profession in this regard. Following approval of the resolution, letters were sent to the Congress together with a copy of the finally approved resolution.

Dr. Allen gave information on the Doctor Draft Law saying that it affected thirty physicians in Missouri. He answered questions of individual Councilors.

Woman's Auxiliary Bulletin

It was suggested that since the Council had agreed to take over the expenses of the publishing of the Woman's Auxiliary Bulletin, that $600 a year be allocated for this purpose. It was felt that no motion was

needed on this since there had been previous Council action on the Council taking this responsibility.

Counsilor's Letters

The proposal that individual Councilors send letters to each member in his district following Council meetings, which had been proposed at the last Council meeting, was discussed. Mr. Skinner pointed out that it would cost approximately $5,400 to do this and the Executive Secretary's letter which is now being sent, practically all the expense being in the mechanical production. After discussion, this was referred to the Committee on Public Policy and Public Relations, three of which were present, with the request that the Committee report to the Council the following day.

The following report was presented by Dr. Francka, Chairman of the Committee on Public Policy and Public Relations: The Committee recommends:

1. The letter of the Executive Secretary shall be continued but should be expanded to include more information on work of office personnel, especially the Field Secretary.
2. After each Council meeting a letter will be sent to each Councilor for correction or approval, after which letters will be prepared and sent to the Councilor for signature and mailing to the secretaries and presidents of each county society in his district with the request that it be read and discussed at the next society meeting.
3. A release will be prepared on Council meeting transactions suitable for publication and submitted to the editor of each medical society bulletin in the state.

Legislation

Mr. O'Brien reported on the Missouri General Assembly, presenting a listing of bills, which appeared in the July issue of MISSOURI MEDICINE, and giving the story behind some of the bills. He stated that special thanks were due to several individuals for assistance in the session. He urged that the Councilors and the physicians in their Districts become acquainted with their legislators before the next General Assembly in 1955.

A.M.A. Session

Mr. O'Brien told the Council that Dr. Robert E. Schlueter, delegate to the American Medical Association, was unable to be present because of the serious illness of his wife. Drs. McVay, Baldwin, Wray, Bristow and Bohrer reported on the session and copies of the majority and minority report of the A.M.A. Committee for the Study of Relations Between Osteopathy and Medicine (which have been published in the J.A.M.A., June 20, 1953) were before the Council and were discussed. Dr. McVay also reported that a survey was being undertaken by the Kansas City Blue Cross of osteopathic schools and hospitals in Missouri. On motion of Dr. Muether, the A.M.A. report was ordered given to the newly appointed special committee of the Council for further study as to any action Missouri should take.

Illness of M. Pinson Neal, M.D.

The illness of Dr. M. Pinson Neal, Columbia, was reported and the secretary was asked to write a letter to Dr. Neal, wishing him speedy recovery.

Resolutions on Interns

It was reported that the two resolutions passed by the MSMA House of Delegates on intern matching plans were submitted to the A.M.A. House of Delegates, neither of which was adopted but that a substitute resolution was adopted which abolishes the rule whereby approval may be withdrawn from an internship program which for two consecutive years fails to obtain at least two-thirds of its slated complement of interns. The resolution also calls for further study of the essentials by a committee appointed by the Speaker of the House, at least half of whom are doctors in private practice not connected with medical schools or affiliated hospitals.

Woman's Auxiliary

Mrs. Helen McBurney, Slater, President of the Woman's Auxiliary spoke briefly, thanking the Council for its support and asking that they continue it and expressing the hope that at some future time the Auxiliary might have a headquarters location.

New Drugs, New Faces, New Instruments

The Upjohn Announces New Cortisone Acetate Tablets

White compressed tablets containing 10 mg. of Cortisone Acetate. The tablets are scored to permit easy administration of 5 mg. if desired.

For use in adjusting the maintenance dose level in cortisone therapy, and for providing small increased dosages during periods of stress.

Mead Johnson Introduces Broad Spectrum Vitamin B Complex Supplement

Mead Johnson & Company, Evansville, Ind., has just introduced MEJALIN, a broad spectrum B complex supplement, which provides more complete effectiveness in combating vitamin B complex deficiencies.

Mejalin contains all eleven identified B complex vitamins, plus liver and iron in balanced amounts.

Available in pleasant-tasting liquid form in 12 oz. bottles and in capsule form in bottles of 100 and 500.

Pharmacy Graduates Told They Can Expect Developments in Medical Research "As Startling as Any in the Past"

College of Pharmacy graduates at the University of Michigan were told they can expect new developments in medical research "as startling as any in the past."

John A. MacCartney, trade relations manager for Parke, Davis & Company, said at the graduation banquet that these new developments were "certain" to result from the "concentration of virtual armies of pharmaceutical researchers upon the problems of cancer, heart disease, renal dysfunction, poliomyelitis and the infirmities of old age."

He told the graduates, "The changes in pharmacy in the next ten years will be many. But, through them, will run the same old background theme—the importance, first of all, of serving people of our communities to the best of our professional abilities; cooperation with members of other health professions in the constant fight against disease and death; a continuing search for new and better therapeutic weapons; and the constant necessity of preparing ourselves for greater responsibilities."

Mead Johnson & Co. Introduces New Prenatal Dietary Supplement

Following a nation-wide survey among practicing physicians, Mead Johnson & Co. has introduced a new prenatal nutrient capsule, Natalins. The intensive survey among physicians revealed that large size and large dosage were the most frequent deterrents to patients' continued use of most prenatal capsules.

Providing generous amounts of vitamins and minerals, Natalins are exceptionally small and easy to swallow. The dosage is small too . . . only 3 capsules daily. Available in bottles of 100 capsules.

BOOK REVIEWS

Textbook of Refraction, by Edwin Forbes Tait. M.D., Associate Professor of Ophthalmology, Temple University School of Medicine; Attending Surgeon (Ophthalmology), Temple University and Montgomery Hospitals. W. B. Saunders Co., Philadelphia and London. 1951. Price $8.00.

Like so many clinical procedures, refraction is a subject that is, at the best, difficult to learn from a textbook. Therefore, it is essential that all of the available technics be described in detail so that the student can apply them readily. Although the author adequately describes the various refractive errors and his concepts of their management, he definitely over-emphasizes some types of refractive technics such as dynamic retinoscopy at the near point, and, just as definitely neglects and depreciates other technics as cycloplegic refraction, use of the cross cylinder and subjective refraction in general. The 160 pages devoted to the extra-ocular muscles and their abnormalities might be better left to texts on that subject.

I am sure that many ophthalmologists would join me in disagreeing with many of the concepts presented in this volume, which make it a better text of refraction for the optometrist than for the student of ophthalmology. T. E. S.

The Battle for Mental Health, by James Clark Moloney, M.D., New York. Philosophical Library. 1952. Price $3.50.

In the author's foreword he indicates that "The Battle for Mental Health" was initiated by Dr. Frank J. Moloney's interest in the Cornelian Corner movement throughout the United States, the Orient and in Europe. He praises warmly the Cornelian Corner relative to training the proper relationship between

Advertisement

From where I sit
by Joe Marsh

It's Fine to Be Fooled —Sometimes

Handy Peters entertained for the ladies of the Auxiliary the other night —and had all the ladies believing for a while that he's the best marksman in the county.

Handy put on a great act. He set up a whole bunch of balloons on a muslin backdrop and then took out his peashooter. He shot blindfolded, standing on his head, every which way—and broke a balloon every time.

No wonder Handy made a big impression on the ladies. What they didn't know—till the show's end—was that Buck Mulligan was hiding behind the backdrop improving on Handy's aim with a hatpin.

From where I sit, we all get things "put over" on us now and again. When it's good-natured—fine! But, some folks would fool us into believing it's wrong to enjoy a glass of beer. Others would tell their neighbor how to practice his profession. For real American tolerance and neighborliness these people are simply "off target."

Joe Marsh

Copyright, 1953, United States Brewers Foundation

North Shore Health Resort

on the shores of Lake Michigan

WINNETKA, ILLINOIS

NERVOUS and MENTAL DISORDERS
ALCOHOLISM and DRUG ADDICTION

Modern Methods of Treatment

MODERATE RATES

Established 1901
Licensed by State of Illinois

Fully Approved by the
American College of Surgeons

SAMUEL LIEBMAN, M.S., M.D.
Medical Director

225 Sheridan Road

WInnetka 6-0211

ACCIDENT, HOSPITAL AND SICKNESS INSURANCE

For Physicians, Surgeons, Dentists Exclusively

$5,000 accidental death Quarterly $8.00 $25 weekly indemnity, accident and sickness	$15,000 accidental death Quarterly $24.00 $75 weekly indemnity, accident and sickness
$10,000 accidental death Quarterly $16.00 $50 weekly indemnity, accident and sickness	$20,000 accidental death Quarterly $32.00 $100 weekly indemnity, accident and sickness

Cost Has Never Exceeded Amounts Shown

ALSO HOSPITAL INSURANCE

	Single	Double	Triple	Quadruple
60 days in Hospital	5.00 per day	10.00 per day	15.00 per day	20.00 per day
30 days of Nurse at Home	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
X-Ray in Hospital	10.00	20.00	30.00	40.00
Medicines in Hospital	10.00	20.00	30.00	40.00
Ambulance to or from Hospital	10.00	20.00	30.00	40.00
COSTS (Quarterly)				
Adult	2.50	5.00	7.50	10.00
Child to age 19	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

$4,000,000.00
INVESTED ASSETS

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

51 years under the same management

$19,500,000.00
PAID FOR CLAIMS

400 First National Bank Building

Omaha 2, Nebraska

$200,000.00 deposited with State of Nebraska for protection of our members

TWENTY-SIX ℞ CENTERS TO SERVE YOU

vailable to your call 17 hours daily.
65 Days of the year.

90 State Registered pharmacists to serve you—pharmacists whose only responsibility is the accurate compounding of your Rx's.

A rigid policy of professional ethics.

The Midwests most complete stock of fresh branded pharmaceuticals.

Katz Drug Company

ST. LOUIS

7th & Locust
8th & Washington
Hodiamont & Easton
6150 Natural Bridge Rd.
Sutton & Manchester

KANSAS CITY

- 8th & Grand
- 12th & McGee
- 12th & Walnut
- 12th & Baltimore
- 10th & Main
- 40th & Main
- 75th & Broadway
- 63rd & Brookside
- Linwood & Troost
- 3030 Prospect
- Independence & Hardesty
- Independence & Prospect
- Gregory & Prospect
- 15th & Cleveland
- 728 Minn., K.C.K.
- 10th & Minn., K.C.K.
- Main & Maple, Indep., Mo.
- Swift & Armour, North K.C.
- 52nd & Roe. Johnson County

ST. JOSEPH

- 6th & Francis
- 6th & Edmond

A BIG TIME-SAVER FOR EVERY DOCTOR

This handy booklet for new mothers was "built to doctors' orders." It contains blank forms for filling in your instructions and formulas.

It provides a permanent case-history record. A memo will bring you a sample . . . or as many as you want for your daily practice . . . without obligation.

Many doctors prescribe "Daricraft Evaporated Milk." It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U.S.P. units of Vitamin D per pint.

PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

parent and infant. This booklet of some 105 pages, written compactly has a good index. Each of the eight chapters has appended its own adequate bibliography.

One may be somewhat surprised to note that in the first chapter he refers to the Japanese as being more or less hypersensative, neural people; that the Japanese are orderly and affectionate, which is the result of compulsive training early in childhood. But this brings conflict in a child, which produces frequent early arteriohypertension, even though mental disorders are much less common than in the Caucasian race.

He also criticises the prevailing excesses in this country, saying this is responsible for many adult patients having mental illness in later adult life. He discusses to a considerable extent the "fibroid" woman, usually sterile; and that she presents a peculiar mental makeup in adult or late adult life.

His chapter 6 is a somewhat depressive one to read. Especially does this concern crime which he designates as a "social illness." That our nation spends yearly the enormous sum of $26,000,000,000; that some 400,000 children go to Juvenile Courts a year; that there is an increase in the number of prisoners in all penal institutions; a statistical list of some ten crimes of various kinds, quotes drunkenness as 150,768 during the year 1946. That with all of this, divorces per thousand of population steadily increase from .5 of the year 1890 up to 2. in 1940, and 4.3 in 1946. He states that there is an alarming increase of alcoholism and drug addictions, that sickness is a great loss to industry and workers.

A. L. S.

SECLUSION MATERNITY

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED: Locum Tenens for 2 years beginning July 15th or August 1st, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

IDEAL LOCATION FOR DOCTOR OR DENTIST. Nearest doctor is one and one-half miles away, location in heart of business section, yet adjacent to residential district. Suitable for combination home and office. 1214 North and South Road, University City, Mo. 5 rooms; tile kitchen and bath; garage; basement. Real Estate Management Co., 317 S. 11th Street, St. Louis, Mo. MAin-0952.

WANTED: Ob.-Gyn. Board eligible graduate of top school to be associated with long established, 8 man group in Central Missouri. 80 bed hospital. Salary open. Partnership early. Reply stating full particulars, first letter, Box 200, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: Young graduate, top medical school. Interested general practice but with sufficient experience to do obstetrics while obstetrician is in service. 8 man group, Central Missouri. Salary open. Partnership after two years. 80 bed hospital. Reply full particulars, Box 201, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: A Board eligible or certified internist from one of best medical schools, fill vacancy in 8 man group in Central Missouri town of 7,000. 80 bed hospital. Practice from territory with 75 mile radius. Salary open. Partnership after two years. Reply stating full particulars re self, first letter, to Box 202, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

GENERAL PRACTICE-COMPLETELY EQUIPPED CLINIC. Partner leaving for Army. Prefer draft exempt G.P. under 35, qualified for general surgery. Volume and remuneration practically unlimited. Excellent hospital facilities. Missouri. Terms open. Full details in first letter. Box 185, Journal of Missouri State Medical Association, 634 N. Grand Ave., St. Louis 3, Mo.

GENERAL PRACTITIONER, young locum tenens for busy general practice. Town 3500, new hospital. Partner entering service. Good chance permanent association when partner returns. Salary open. Write Robert W. Smith, M.D., Marceline, Mo.

WANTED—General Practitioner, draft replacement. Pleasant county seat of 1500 in Atchison County, Missouri. Active practice. New hospital 15 miles away. Contact Wallace Carpenter, M.D., Rockport, Mo.

WANTED: Thoracic Surgeon: 650-bed, fully accredited State Tuberculosis hospital with complete, modern facilities, located in Midwest, near city of 80,000 population has immediate opening for Surgeon who is Diplomate American Board and who is Board eligible or Diplomate American Thoracic Board. After established full-time work at hospital, later be able to do part-time work and establish private practice in nearby city which has excellent opportunity for thoracic surgeon. Salary $12,000 per annum. Box 187, Mo. State Med. Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

WANTED: Internist: 650-bed, fully accredited State Tuberculosis hospital with complete, modern facilities, located in Midwest, near city of 80,000 population has immediate opening for internist, eligible or Diplomate American Board. Salary $12,000 per annum. Box 188, Mo. State Med. Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

WANTED: Staff Physicians: 650-bed, fully accredited State Tuberculosis Hospital, located in Midwest near city of 80,000 population has immediate opening for staff physicians who are graduates of American Medical Schools, who have finished an approved internship or who have finished an approved internship and have had one or more years of experience in tuberculosis or chest diseases: Physician I Tuberculosis—starting salary $6,000 per annum to $9,000 per annum in $500 steps (annually); Physician II Tuberculosis—starting salary $7,000 per annum to $10,000 per annum in $500 steps (annually). Box 189, Mo. State Medical Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

PHYSICIAN WANTED. Unopposed general practice in farming community 1½ hours from St. Louis. Good office and equipment including X-Ray and Cardiograph. 15 minutes from good hospital. Leaving for service when replacement is found. Write John H. Hooker, M.D., Clarksville, Mo.

Buy
United States
Savings Bonds

INDEX TO ADVERTISERS

Abbott Laboratories 580, 628-629
Ayerst, McKenna & Harrison, Ltd. 608

Bilhuber-Knoll Corp. 581
Blue Cross-Blue Shield 625

Camel Cigarettes 585
Ciba Pharmaceutical Products 591
City View Sanitarium 645
Cook County Graduate School 635

Fairmount Hospital 652

Hamilton Schmidt Surgical Co. 645

Kansas City Southwest Clinical Society 615
Katz Drug Company 651
Keeley Institute 635
Kent Cigarettes 640-641
Knox Gelatine Company 614

Lederle Laboratories ..... Insert
Eli Lilly & Company 594, 618-619

Mead Johnson & Company 556
Medical Protective Company 614
Merck & Company 593
Milwaukee Sanitarium 636

Neurological Hospital Association 645
Norbury Sanitarium 652
North Shore Health Resort 650

O'Connell Bros. Inc. 598

Parke, Davis & Company 578-579
Chas. Pfizer & Co. 587
Physicians Casualty Association 650
Mary E. Pogue School 645
Producers Creamery Company 652

Research Clinic 636

Schering Corp. 583
Schieffelin & Co. 654
G. D. Searle & Co. 607
E. R. Squibb & Sons 620

U. S. Brewers Foundation, Inc. 649
Upjohn Company 616

West Texas Maternity Hospital 645
Whittaker Laboratories 635
Winthrop-Stearns, Inc. 589
World Medical Association 655

Zemmer Company 645

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

In very special cases

A very superior Brandy

Specify 84 PROOF

★ ★ ★

HENNESSY

THE WORLD'S PREFERRED
COGNAC BRANDY

For a beautifully illustrated book on the story of Hennessy, write—

Schieffelin & Co., Dept. HT, 30 Cooper Square, N.Y. 54

Curiosa et Trivia

William B. McCunniff, M.D.

Missouri Dirt Makes Good! The soil from which Aureomycin was developed came from an undisclosed piece of land near Columbia.

A heavy subject, insulin: has a molecular weight of about 12,000. But a lighter aspect: the additive protamine comes from the sperm of any of several game fish—rainbow trout, for one.

Human feces contains more tetanus bacilli than notorious horse manure.

But not an unmixed blessing: new O.R. head nurse, Caroline Hampton, developed marked dermatitis on hands and arms. For her protection, Goodyear Rubber Co. manufactured thin rubber gloves, at the request of Dr. William S. Halsted. Rubber gloves, thus established, became mandatory in surgery. Worthy of mention: Miss Hampton and Dr. Halsted were married in June of the next year!

Grateful patient Rachmaninoff dedicated his Concerto No. 2 in E minor to a Monsieur N. Dahl, a psychiatrist, who lived with and cared for the composer after his first concerto was a failure and he had decided to quit composing.

There is no "prop" in proptosis . . . pronounced pro-tosis.

Joseph Trachtman, whose "Estate Planning" was featured in February Missouri Medicine, quit premed at Pennsylvania, is quoted in *The New Yorker* ". . . organic chemistry ruined the idea for me . . . you just stood around and measured things."

Preoperative scrub at Johns Hopkins, 1889: ten minutes with brush and green soap, soak in saturated solutions, first of potassium permanganate, then oxalic acid, finally five minutes in 1:100 bichloride of mercury.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

Today's Health

Mrs. C. Alex (Helen) McBurney, *President, Woman's Auxiliary*

"*Today's Health*" is the title of the health magazine published by the American Medical Association for more than twenty-nine years in the interest of better health for the American people. Its aim is to inform readers about modern medicine, helping them to retain and improve their health. It teaches patients to understand and to cooperate more effectively with their physician, helps them give their children a healthier start in life and indicates health education opportunities in their communities.

All the facilities of the American Medical Association, with its more than 150,000 physician members, are used by the editors to bring the readers authentic, reliable information on health topics.

Readers of *Today's Health* increase their knowledge of food values, learn to recognize some of the danger signals associated with certain diseases, can better protect themselves and their families from infections and are encouraged to live and play healthfully.

The following counties in Missouri reached their quotas or better: Nodaway-Atchinson-Gentry-Worth, Lafayette, Cape Girardeau, Franklin-Warren-Gasconade, Grand River, Buchanan and Jackson.

The American Medical Association has requested the state auxiliaries to support *Today's Health*. Let us make a good showing this year. The subscription to physicians for a year is $1.50. Contact your state chairman, Mrs. J. S. Summers, 114 W. Circle, Jefferson City, or the American Medical Association regional chairman, Mrs. Harry M. Gilkey, 4941 Westwood, Kansas City.

Capsule Clinics

Irving A. Wien, M.D.

• The normal thyroid gland concentrates between 15 and 40 per cent of a tracer of radioiodine, while the hyperplastic gland of Graves' disease concentrates 50 per cent or more of the tracer, and the hypofunctioning gland concentrates less than 15 per cent. Editorial, Surg., Gynec. & Obst. **96** (January) 1953.

• During the period 1936 to 1940 in the Lahey Clinic only 24.1 per cent of the patients operated upon for cancer of the stomach had a resection, but since that time the resectability rate has increased to 37 per cent (1940-1945). Surgical Practice of the Lahey Clinic, W. B. Saunders Co., Philadelphia, 1951.

• The chief action of curare lies in its production of a flaccid muscular paralysis affecting all striated voluntary muscles. These muscles are not affected at one time but in a progressive fashion. In one hour after its intravenous administration, curare is no longer detectable in the circulating blood. Kern, E.: Current Researches in Anesthesia & Analgesia **29** (Sept.-Oct.) 1950.

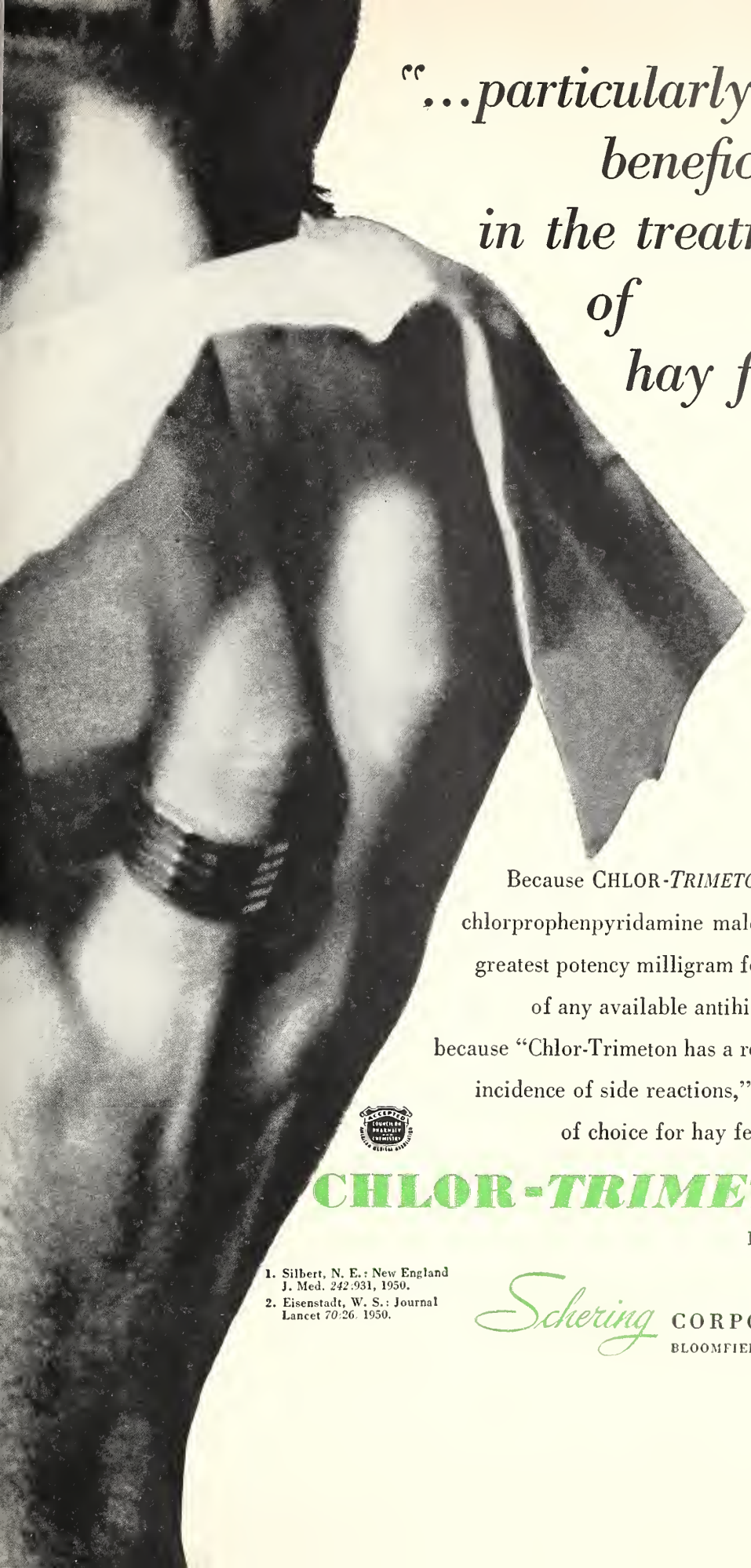
• An investigation of the menstrual characteristics of eighty-six women living in a tropical climate (Singapore) revealed little if any difference in menarche, amount of menstrual flow, duration of flow, and length of the menstrual cycle as compared to women in a temperate climate (England). Wadsworth, G. R.: J. Obst. & Gynec. **60** (February) 1953.

• The Stigminene injection test for the diagnosis of early pregnancy proved to be 100 per cent accurate in a group of eighty-three patients who met the requirements of the test. Bookrajian, E. N., and Truter, W.: Internat. M. Digest **62** (January) 1953.

• Carcinoma of the lip is a relatively benign disease if seen early and treated adequately. In the experience of the authors, prophylactic neck dissection is not warranted since metastases are relatively infrequent. Day, R. G., Jr., and Brochu, J.: Guthrie Clin. Bull. **22** (January) 1953.

• Because of its adaptability to this particular field, its few contraindications, its minor complications and easy course it offers the patient, spinal anesthesia is now preferred for transurethral prostatic resections. Brehn, W. F., and Del Grippo, G. A.: Guthrie Clin. Bull. **22** (January) 1953.

• The expression of the chemical constituents of the body fluids in terms of milliequivalents and milliosmols expresses their physiologic power ratings and makes the laboratory data far more valuable diagnostically and therapeutically. Moyer, C. A.: Fluid Balance, A Clinical Manual, Year Book Publishers Inc., Chicago, 1952.



"...particularly beneficial in the treatment of hay fever."[1]

Because CHLOR-*TRIMETON*® maleate, chlorprophenpyridamine maleate, has the greatest potency milligram for milligram of any available antihistamine, and because "Chlor-Trimeton has a relatively low incidence of side reactions,"[2] it is a drug of choice for hay fever patients.

CHLOR-*TRIMETON*
maleate

1. Silbert, N. E.: New England J. Med. *242*:931, 1950.
2. Eisenstadt, W. S.: Journal Lancet *70*:26, 1950.

Schering CORPORATION
BLOOMFIELD, NEW JERSEY

CHLOR-*TRIMETON*

SCHERING

With Our G. P.'s

William J. Shaw, M.D.

The general practitioner in Missouri is an ardent believer in continuation of postgraduate medical instruction.

In addition to formal postgraduate courses presented by St. Louis and Washington universities in St. Louis and Kansas University in Kansas City, scientific meetings are held each year in the ten councilor districts of the Missouri State Medical Association. In 1952-1953, in nine cities in Missouri, ten hours of postgraduate lectures were presented to appreciative audiences. The annual meeting of the Missouri Academy of General Practice presents a well-rounded scientific program as does the Southwest Clincial Society in Kansas City and the Missouri State Medical Association.

William J. Shaw, M.D.

The General Practitioners Study Club of Greater St. Louis, conceived and directed by Dr. John O'Connell, sponsors eight two-hour monthly meetings without fees or dues. The St. Louis Academy of General Practice has sponsored monthly scientific programs with noted authorities as guest speakers for six years. The Kansas City Academy of General Practice follows a similar custom.

Two smaller chapters in the state deserve recognition. The General Practice Post-Graduate Club of Gasconade-Franklin-Warren counties received its charter from the Missouri Academy in November 1951. Dr. William R. Richardson, Union, is secretary of this group and reports an enviable attendance of 90 per cent of the members since its organization. The Southeast Missouri chapter of the Missouri Academy received a charter on May 8, 1952. Dr. Edward D. Campbell, Cape Girardeau, was elected first president; Dr. John J. Killon, Portageville, vice-president; Dr. Paul Baldwin, Kennett, president-elect, and Dr. John Trolinger, Jackson, secretary-treaturer. It is interesting to note that the only three active charter members of the Cape Girardeau County Medical Society, Drs. D. I. L. Seabaugh, O. L. Seabaugh and Edward Crites became active members of the newly organized Southeast Missouri chapter of the Missouri Academy of General Practice.

To any general practitioner in Missouri who feels this assortment of postgraduate courses is not inclusive or who wishes to wander further from home and hearth, an invitation is extended to attend the World Medical Association meeting in the Hague, Netherlands, with a six day preliminary conference on World Medical Education in London, England, on August 22-29 inclusive.

Progress Notes of Prepayment Plans

Kansas City Blue Cross-Blue Shield

Kansas City Blue Cross-Blue Shield conducted its fifth nongroup individual enrollment campaign during the first half of May.

This campaign was opened with full page announcements in the principal newspapers of the area. Individual enrollment stations were set up in the hospitals, and physicians distributed 76,971 leaflets to their patients announcing the enrollment.

The excellent cooperation of hospitals and physicians led to another successful campaign, with about 10,000 new members being enrolled.

May 12 was the date of the annual meeting of Blue Cross-Blue Shield, with the principal speaker being E. Dwight Barnett, M.D., Director of the Institute of Administrative Medicine, of Columbia University. Dr. Barnett warned against the dangers of abuse of Blue Cross-Blue Shield, and pointed up the need for continued efforts in improvement of benefits and enrollment technics.

Mr. Frank E. Smith, Director of the Blue Shield Commission, presented Kansas City Blue Shield with a certificate of award for completion of ten years of service to the people of the area.

Frank L. Feierabend, M.D., will serve Blue Shield as president in the administrative year 1953-1954; Forrest F. Dodds was reelected president of Blue Cross.

Meat...

and the Diet after 50

Although caloric needs in the later decades of life lessen with decreasing physical activity and diminishing metabolic rate, clinical observations[1] corroborated by experimental studies[2] show that protein needs of the aging organism continue at the levels of adequacy in earlier years.[3] For avoidance of protein deficiencies, which the aged are prone to develop,[4] the protein quota of the diet of persons over fifty should be more liberal than is often the practice.[5] In providing this quota, lean meat may well be one of the protein foods of the daily diet.

In the years beyond fifty, as well as before, continuous adequate protein nutrition remains an absolute necessity for maintenance of a normal concentration of plasma proteins and, in turn, a normal osmotic pressure of the plasma.[6] Even more pronounced in the aged than in younger persons are the ill consequences of hypoproteinemia—edema, decreased resistance to generalized infection, retarded bone healing, and poor wound healing.[7] Furthermore, dietary protein is essential for the continuous chemical regeneration of cell protein in the prevention of abnormal tissue wasting, one of the most characteristic and obvious changes in the geriatric patient.[8]

But meat is much more than an outstanding protective protein food in the dietary of persons over fifty. It also supplies generous amounts of the B group of vitamins and of iron, phosphorus, and other essential minerals. In the well-balanced diet of the later years of life, meat is just as important for the maintenance of nutritional and physiologic well-being as it is during the earlier years of life.

REFERENCES

1. Freeman, J. T.: Basic Factors of Nutrition in Old Age, Geriatrics *2*:41 (Jan.-Feb.) 1947.
2. Sherman, H. C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Company, 1952, p. 208.
3. Tuohy, E. L.: Feeding the Aged, J.A.M.A. *121*:42 (Jan. 2) 1943.
4. Ohlson, M. A.; Roberts, P. H.; Joseph, S. A., and Nelson, P. M.: Dietary Practices of One Hundred Women from Forty to Seventy-Five Years of Age, J. Am. Dietet. A. *24*:286 (Apr.) 1948.
5. McLester, J. S., and Darby, W. J.: Nutrition and Diet in Health and Disease, ed. 6., Philadelphia, W. B. Saunders Company, 1952, p. 222.
6. Madden, S. C., and Whipple, G. H.: Amino Acids in the Production of Plasma Protein and Nitrogen Balance, Am. J. M. Sc. *211*:149 (Feb.) 1946.
7. Fishback, F. C.: Surgery in the Aged, Clinics *4*:1250 (Feb.) 1946. Zintel, H. A.: The Role of Nutrition in Preoperative and Postoperative Care, Am. J. M. Sc. *207*:204 (Feb.) 1944.
8. Kirk, J. E.: Nutrition and Aging, Nutrition Rev. *9*:321 (Nov.) 1951.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago... Members Throughout the United States

What Is Your Hobby, Doctor?

Poetry in Pictures

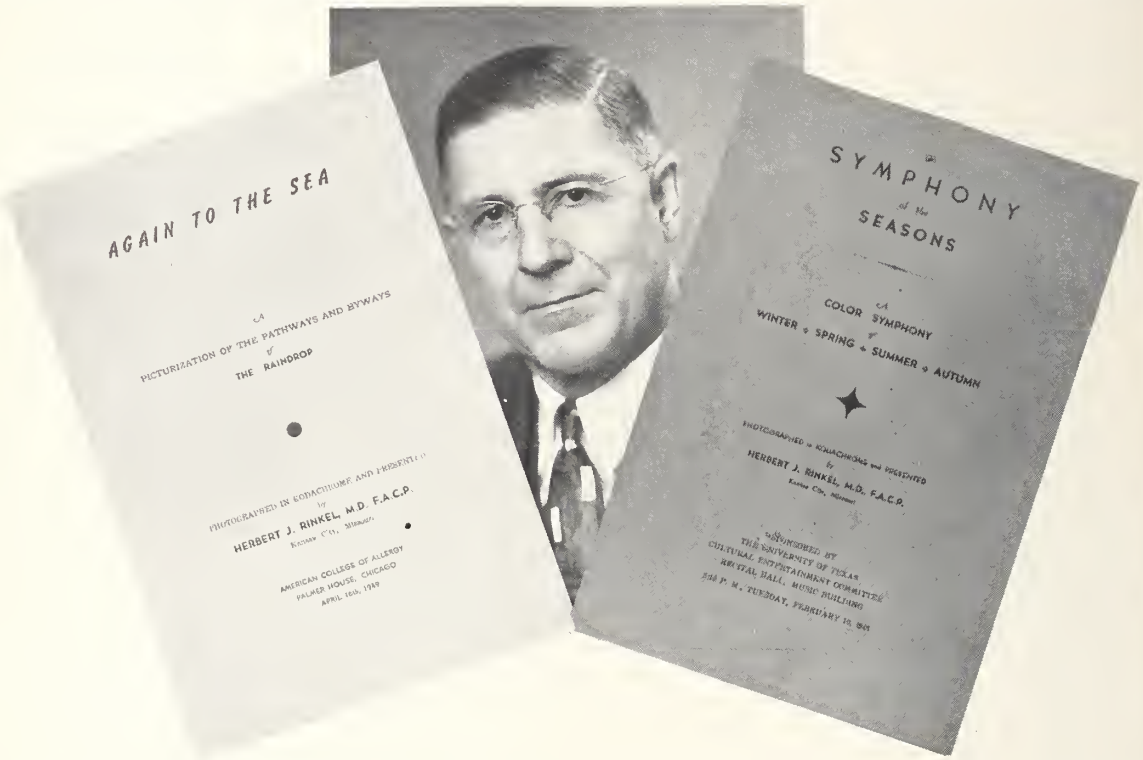
As patients walk into the reception room of Herbert J. Rinkel, M.D., Kansas City, they are aware of most unusual pictures lining the wall. Most of these are still-life. Various ordinary flowers, such as lilies, daisies, snapdragons, and spirea, together with other rather prosaic subject matter, would almost pass unnoticed if it were not for the skilful technical treatment and the tiny, scrawled "Rinkel" underneath.

Dr. Rinkel became interested in photography as a boy in Haviland, Kansas ("the Quaker town"). The town photographer was the father of Dr. Rinkel's former associate, Dr. Orville Withers.

During World War I, while serving with the 353rd Regiment, of the 89th Division, he received a special appointment by the Colonel, with these words: "Relieved of all other duties, to make a complete photographic history of this regiment." This appointment was made while in Germany, and the completeness with which the assignment was carried out is attested by the fact that 1,711 war negatives were made, and more than 100,000 copies were sold to the men in the regiment.

In 1930, Dr. Rinkel made the first all color medical film on allergy made in the United States. This so stimulated his interest that in 1936 he took his war bonus and purchased his first motion picture camera.

His first full length color film, "Symphony of the Seasons," required almost five years to complete. It has had 382 presentations, including every section of the entire United States; five shows were in Chicago alone! The subtitle: "A Color Symphony of Winter, Spring, Summer, and Autumn" shows: "Man viewing the beauty of each season," with the pictorial beauties integrated with symphonic music of such masters as Beethoven, Dvorak, Wagner.



His next opus magnum was, "Again to the Sea," a picturization of the pathways and byways of the raindrop. This has been shown 138 times in the last seven years. Here is Dr. Rinkel's foreword:

All things tend again to the Sea,
But none go so quickly, or as often, as I—
For I am The Raindrop.

I tumble down the mountainside; I leap across
The precipice and etch a brook thru the lea.
I bathe the feet of the flowers; I kiss their
Petals with morning dew.

I tarry a while in blue and emerald lakes.
I pass by villages; I wash the city's great

(Continued on page 668)

speaking of allergy, let's get down to cases

The documented record – more than 900 reports – shows literally thousands of allergic patients relieved of symptoms by Pyribenzamine. Relief has been prompt and prolonged, with extremely low incidence of sedation or other side reactions.

On the basis of published evidence, no other antihistamine combines greater clinical benefit with greater freedom from side effects. *Supplied:* Pyribenzamine hydrochloride (tripelennamine hydrochloride Ciba) 50 mg. (scored) tablets, bottles of 100 and 1000.

Pyribenzamine®

Ciba

2/1911M

Our Auxiliary

Together We Progress

Mrs. C. Alex (Helen) McBurney, *President*

The Auxiliary has been honored by your President in being asked to appear before the Council of the Missouri State Medical Association, during their meeting in St. Louis, June 28, 1953. We thank the Council for their interest in our work and for the cooperation they have given us, in helping finance the publication of the *Quarterly Bulletin.*

As an Auxiliary to the Missouri State Medical Association we are "that which aids or helps." We hope that with their advice and counsel we will continue to do an efficient and effective job for them.

The fall executive board meeting will convene at 10:00 a. m., Tuesday, September 29, at the Missouri Hotel in Jefferson City. At the 1:00 o'clock luncheon, we shall be honored by having the following guests: James T. Blair, Jr., Lieutenant-Governor, who will bring greetings from our state and welcome us to Jefferson City; Dr. Roscoe L. Pullen, Dean of the School of Medicine at Missouri University, will tell us the objectives of the new school of medicine. The agenda will be mailed to the board with the call to the meeting. The members-at-large and all wives of physicians are invited to attend this meeting, to help make it a success.

As you are planning your programs, remember that our national auxiliary to the A.M.A. is stressing, in addition to the regular and special committees:

1. The American Medical Educational Foundation, which they are asking all counties to include in their budgets. It is only through financial aid and contributions that we will keep the medical schools free from governmental control.

2. Work toward giving as many nursing scholarships as possible. Encourage our friends, in other national organizations to give nursing scholarships, thus alleviating the critical shortage of nurses.

3. We are again asked to support the A.M.A. health magazine *Today's Health.* This fine magazine is worthy of our support.

4. Include in your program, some phase of the newly formed committee on "Mental Health."

County presidents and county chairmen, please pass on the new material sent to you by national in order that all county committees may do an effective job, for the auxiliary. If further information is needed, please write me.

WHAT IS YOUR HOBBY, DOCTOR?

(Continued from page 666)

Stone faces and water its parks.

Yet, I cannot long deny the eternal urge
To return...Again To The Sea.

Technicians with the Eastman Kodak Co., as well as the Editor of their journal, have made these statements concerning Rinkel's work, "This reel has more beautiful shots than we have ever seen in one can of film,"..."most unusual and beautiful sequence of motion picture film that I have ever reviewed."

In 1949, Dr. Rinkel lectured at the University of Paris and, while there, produced "The European Sojourn of 1949." Thus, he was enabled to make comparative photographic studies of the terrain he had photographed thirty-one years before. As official photographic historian of the Society of the 353rd Infantry, he will present several thousand comparative films (of 1917-1949) for his buddies on September 4, 1953, at their annual reunion. This, he avers, "is my biggest show to date." This event will require two movie projectors, plus slide projection, together with sound reproduction effects, as he has narrative and sound effects with the pictures.

From Dr. Rinkel's description of all the equipment and details he is arranging for this event, one may readily understand what he means when he says this is "my biggest show."

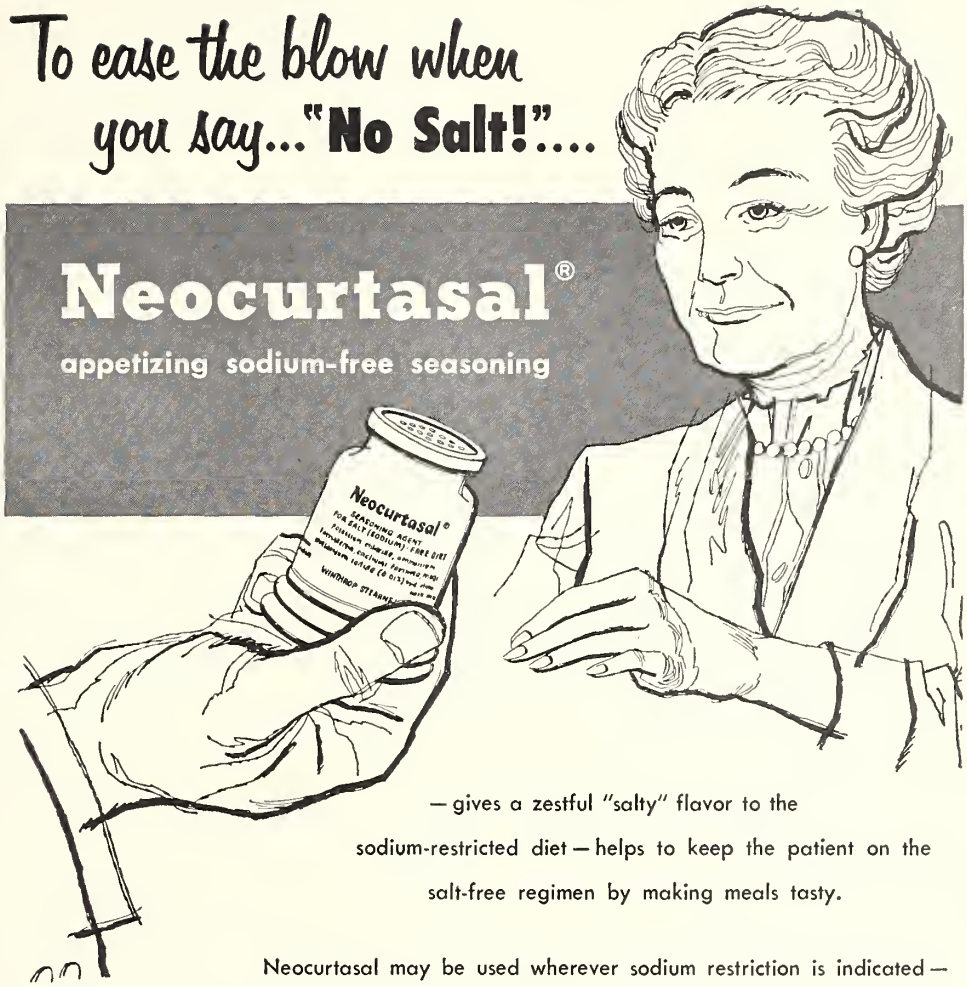
Many physicians list photography as their hobby, but we doubt seriously if others can challenge Herbert Rinkel in his hobby as poet, producer, photographer.

(We would appreciate information concerning other members with unusual hobbies. V.T.W.)

To ease the blow when you say..."**No Salt!**"....

Neocurtasal®

appetizing sodium-free seasoning



— gives a zestful "salty" flavor to the sodium-restricted diet — helps to keep the patient on the salt-free regimen by making meals tasty.

Neocurtasal may be used wherever sodium restriction is indicated — it is completely sodium-free. May be used like ordinary table salt — added to foods during or before cooking or used to season foods at the table.

WINTHROP

Neacurtosol and Neacurtosal iodized (potossium iodide 0.01 per cent) supplied in 2 oz. shokers and 8 az. battles.

Neocurtasal

"...trustworthy non-sodium containing salt substitute"[1]

Write for pad of diet sheets.

1. Heller, E. M.: The Treatment of Essential Hypertension. Canad. Med. Assn. Jour., 61:293, Sept., 1949.

WINTHROP-STEARNS INC.

Neacurtasol, trademark reg. U.S. & Canada

NEW YORK 18, N. Y. • WINDSOR, ONT.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

There has been and still is a lot of comment on the May Crossroads. Most has been favorable and I will be the first to admit that it inflates my ego. A few mayhaps misunderstood and say it was dressed up in its Sunday britches. Some recalled their early days at another Crossroads and seemed a bit envious. Can't deny that the incidences written were those I like to remember.

What I am doing is just a way of life and there are many of them. You have chosen yours. Many of my classmates chose a specialty. (Many are getting fat doing it.) Some are in the service as a career. Most of us are doing just what we want to do where we want to do it. The way I figure none are making any sort of sacrifice.

There is another side to practicing at the Crossroads. One that I don't very often like to talk about. It's the side that brings the disillusions, disappointments and heartaches. I hope never bitterness. One is not the dear old family doctor to all in the community. To some he is a middle of the night, Sunday and Holiday convenience. Ever get a two AMer to go see a few day old baby that you know aforehand someone else delivered? Ever get called to remove the sutures on a patient that went to the city to have the surgery done? Ever have a specialist tell your patient she was being poisoned on digitoxin and find he had prescribed digitalis leaf?

At those times at the Crossroads we swallow hard our pride and go and do because "temperate public opinion expects the service"—not because we are eager beavers and are afraid we will miss a buck.

The quote is from Principles of Medical Ethics, Chapt. 2, Sec. 4. We can't expect our patients to be versed in these principles although it wouldn't hurt to expose them. I have a sneaking suspicion that there are few medical schools that have them as required reading. Wonder how many Docs have read them recently or even have a copy in their files. Why not print them in MoMed—a section at a time?

A little weazley pickpocket who was transferred to Bellevue from the jail once astounded our section when he informed us that there was such a thing as honor among thieves. That I can never forget when temptation rears his head.

Sometimes I AM tempted.

Your satisfied Crossroadser,
Pete

Help Wanted!

Here's an easy way for every member to help us develop a strong "Members in the News" Department. Postcards (similar to the one reproduced below) are available at the Executive Office, or you may obtain them from your district councilor.

— MEMBERSHIP NEWS —

MISSOURI (missouri state medical association journal) MEDICINE

Who?

What?

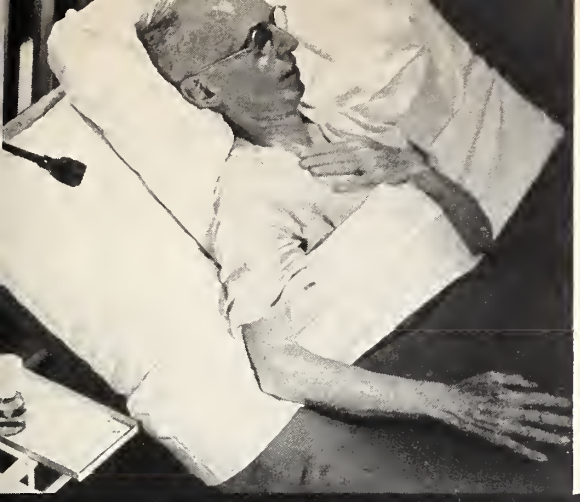
Where?

When?

Why?

ABOVE INFORMATION IS ACCURATE. Please send all information before 20th of month. Remember! What's NOT News to You IS News to Others.

Contributor .....



Terramycin®

BRAND OF OXYTETRACYCLINE

an agent of choice in urinary tract infections

- *promptly effective against a broad-spectrum of urinary pathogens*
- *high concentration in active form in urinary tract*
- *well tolerated, even upon prolonged administration*

Terramycin is acclaimed by urologists everywhere for unsurpassed action in

chronic urinary tract infections

acute urinary tract infections

urinary tract surgery

"The resistant cases showed remarkable response."[1]
". . . has cured where all other antibiotics have failed."[2]

"Patients with pyelitis were well and doing their usual duties within 24 hours . . ."[3]

"Morbidity from apparent genito-urinary causes was noted in only one patient of 44 patients who received prophylactic Terramycin."[3]

"Terramycin is generally well tolerated, the percentage of relapses being low and the percentage of bacteriological as well as clinical cures high."[2]

1. Ferguson, C., and Miller, C. D.: J. Urol. *67*:762 (May) 1952.
2. Trafton, H. M., and Lind, H. E.: Ibid. *69*:315 (Feb.) 1953.
3. Blahey, P. R.: Canad. M. A. J. *66*:151 (Feb.) 1952.

Pfizer

PFIZER LABORATORIES BROOKLYN 6, N. Y.
DIVISION, CHAS. PFIZER & CO., INC.

President's Comments

Meetings of interest to Missouri physicians scheduled during the coming months are:

Mississippi Valley Medical Society, Springfield, Illinois, from September 23 through 25.

Kansas City Southwest Clinical Society, Kansas City, September 28 through October 1.

Southern Medical Association, Atlanta, Georgia, October 26 through 29.

American Medical Association, Interim Session, St. Louis, December 1 through 4.

Any or all of these should afford an excellent opportunity to brush up on the latest advances in medicine.

E. Claude Bohrer

Others Say

Journalistic Forays Into Medicine

Judging from the number of popular publications containing at least one medical article per issue, journalistic forays into medicine are quite remunerative for author and publisher . . . and may provide the vital information for your patient who inquires about the "new wonder drug" described in the April issue of the *Gashouse Gazette*. I have no doubt but that much good results from such widespread interest in medicine, but I find it somewhat disconcerting to have a patient enter the consultation room with his own diagnosis of hypertension and request a prescription for *Rauwolfia serpentina*.—Charles F. Wilson, M.D., The President's Page, *Cape Girardeau Medical Society Bulletin*.

Revive "Socialization Boom"?

. . . We doctors are ingrates not to appreciate what the advocates of socialized medicine did for our prosperity. These people informed the public that their health was being neglected because they didn't get adequate medical care. Then the newspapers played up the shortage of physicians. Immediately the sick, the near-sick, and the neurotic flocked to our offices. Then, when the furor over socialized medicine died down, our business dropped off. Maybe we doctors should revive the socialization boom so that we can again pay the rent.—Anonymous M.D., quoted by William E. Pentz, M.D., St. Joseph, in *Medical Economics*.

We're Pullin' for Pullen

'Round the Columns of Old Missouri up in Columbia rising rapidly is the architectural foundation of a four year medical school . . . the choice of the school's location is wise. Any other location . . . would have been just as wise. The facts are . . . the school is finally becoming a reality . . . its opportunities are unlimited. It can and will become one of the leading schools of medicine. It will be an answer, at least in part, to the physician shortage throughout our nation. It will be a school Missourians can point to with pride. . . . To M. Pinson Neal . . . Dean . . . during the period of turmoil and strife, we owe a debt of gratitude. He carried on and followed through in the best traditions of Missouri Medicine. . . . We welcome . . . Dean Roscoe L. Pullen . . . as a fellow Missourian and a fellow physician . . . we offer him our congratulations and fullest cooperation. We're pullin' for Old Missouri; we're pullin' for Pullen!—Martyn Schattyn, M.D., *St. Louis County Medical Bulletin*.

For One Metropolitan Medical Society

. . . The City of St. Louis and St. Louis County are geographically delineated, but neither can function completely independently in community life. So it goes with medicine, which has a most intimate relation in the metropolitan family. There should be union of the City and County Medical Societies.—A. N. Arneson, M.D., *The Bulletin of the St. Louis Medical Society*.

Ethics (and Common Decency) in Referrals

. . . In the last three months I have felt it necessary to refer three patients for surgical treatment, a rather extensive and intensive medical workup, and for office consultation and in each instance, I have yet to receive the first word regarding the progress and outcome of the surgical procedure or the outcome of the consultation in any of the three cases. . . . I believe that when a referring physician finds it necessary to request the results of consultation after two months or even after one month that the maximum stress has been placed upon this abstract quality of good practice and that those persons who find themselves guilty of exerting this strain should, in the terms of the professional military man, make a new estimate of the situation and select a new route of approach.—Carl D. Siegel, M.D., "In the Mail," *Jackson County Medical Society Bulletin*.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 September, 1953 Number 9

THE MANAGEMENT OF CHRONIC OBSTRUCTION OF THE VENOUS AND LYMPHATIC CHANNELS

DARRELL A. CAMPBELL, M.D.
ANN ARBOR, MICH.

MANY CLASSIFICATIONS of chronic venous and lymphatic obstruction have been offered in an effort to clarify the etiologic agent. Most of these include various combinations of the following: (1) deep venous thrombosis, (2) varicose veins, (3) surgical ligation or excision, (4) malignant disease of pelvic viscera, (5) congenital maldevelopment, (6) invasion of parasitic agents, (7) trauma and (8) infection.

All of these have singular attributes which must be kept in mind if a logical diagnosis is to be made and effective treatment offered. The commonest in this country are chronic venous and lymphatic obstructions which occur as sequelae to thrombosis of the deep venous channels of the lower extremity. This has recently been called the "post-thrombotic" or "postphlebitic" syndrome.[1] It is characterized by any combination of (a) edema, (b) pigmentation of the skin, (c) fibrosis of the subcutaneous layers, (d) varicose veins, (e) ulceration of the skin, (f) recurrent infection and (g) the production of disabling subjective symptoms such as heaviness, fatigue and pain.

PATHOLOGIC ANATOMY

This syndrome is the result of two processes: thrombosis, which produces obstruction from within the vein; and inflammation which produces obstruction from without both the venous and lymphatic channels. During the acute process, thrombosis is important from the standpoint of producing sudden death and, later, as the vein is recanalized, destruction of the valves prevent their use as effective devices in eliminating hydrostatic pressure. The second process, inflammation, is of most importance in producing most of the signs and symptoms of the syndrome. Eventual inclusion of the vein wall by the inflammatory reaction, as well as perivenous tissues and lymphatic channels, results in sclerosis and fibrosis of all elements.

Anatomically, because of the effect of gravity and man's erect position, the disease occurs almost exclusively in the lower extremities. In a normally functioning venous system, venous pressures are increased ten times in the upright position. Obesity has a profound influence upon the occurrence of the disease, and poor hygiene of the feet and legs is frequently present.

PREVENTION

There is an estimated 300,000 to 500,000 patients disabled from this disease in the United States. Considering pain, hospitalization and workdays lost in industry, this is one of the most important afflictions now prevalent. Preventon is most important and, though not always possible, much can be done during the acute phase to prevent or minimize important sequelae.[5] These include (1) early ambulation, (2) exercises for bed patients, (3) elastic supports, (4) anticoagulants and antibiotics and (5) graded exercises and care in early post-thrombotic period.

Considerable time must still elapse before a detailed knowledge of the effects of antibiotics and anticoagulants upon the incidence of these complications will be available. The incidence during the previous era, during which only conservative treatment in the form of rest, elevation and elastic wrappings were used is presented by Hojensgard.[7] A most interesting feature of his analysis is the remarkable decrease in edema, and the absence of other symptoms, in the period after thrombosis between six months and one year. This is a frequently recorded observation and, undoubtedly, accounts for the popularity and apparent good results of many and frequently unusual types of therapeutic recommendations. The end result varies directly with the severity of the process. Thus, the higher the process extends into the thigh, the greater the degree of ob-

Presented at the 95th Annual Session of the Missouri State Medical Association, April 26-29, 1953, Kansas City.

struction, the more widespread the area of inflammation and the more severe the sequelae. Once the syndrome is established, trauma to poorly nourished tissues with inability of the wound to heal itself, and recurrent streptococcal

Fig. 1. Example of severe post-thrombotic lymphedema, before and after operation. Prior to operation, he was a curiosity in a circus, and subsequently (figure 2) returned to the circus where he is now working as part of the crew.

infections, chiefly in the lymphatic channels, contribute to difficulty of the problem.

DIAGNOSTIC MEASURES

An accurate diagnosis can be made in 95 per cent of cases by a careful history and physical examination. Bilateral post-thrombotic syndrome must be differentiated from edema of cardiac or renal origin. Intra-abdominal tumors, chronic venous insufficiency of pure varicose vein origin and other diseases presenting similar diagnostic pictures can nearly always be detected in the course of everyday methods. Occasionally special methods of examination are required. (1) Venography. The roentgenographic visualization of the location and degree of obstruction is frequently helpful.[2, 8, 9] The identification of effective valves, and the presence of functioning collaterals, in some instances assist in determining the type of treatment to be employed. (2) Ambulatory venous pressures. In normal venous networks, venous pressures in the lower extremity will fall during exercise. In those with obstruction to the major venous pathways, the venous pressures remain high or even go higher during exercise. This is a diagnostic test of function which is of considerable prognostic assistance. Time does not permit an analysis of the technic or interpretation, which is published elsewhere.[3, 4]

TREATMENT

The patients in which the sequelae have reached some degree of severity present a problem which, basically, is incapable of being completely corrected. Hence the foundation of any type of treatment is the proper understanding, upon the part of the patient, that the leg is abnormal, will never again be a normal leg and that the requirements of a social, domestic or occupational existence must be gauged to the ability of the extremity to perform in a reasonably normal manner without significant symptoms. An appropriate daily routine has, by some authors, been referred to as "The New Way of Life."[8, 9] This consists of certain specific measures which are applicable to those who are, for the first time developing important symptoms, as well as to those whose disease is of long standing and, perhaps, have had recent surgical treatment. This advice and care, however, is so fundamental that no type of treatment, nonsurgical or surgical, is of any avail unless it is followed to the smallest detail. These specific measures are as follows: (1) maintain edema at a minimum, (2) elastic supports when erect from morning until night, (3) regular fifteen minute periods of sitting down and elevating the leg after standing thirty minutes, (4) two or more half hour periods each day of complete recumbency with elevation of the leg, (5) elevation of the foot of the bed four inches, (6) daily careful washing and applications of bland ointment, (7) daily small doses of antibiotics or sulfonamides for recurrent infections.

SURGICAL MEASURES

1. *Sympathectomy.*—When evidence of sympathetic dystrophy occurs, such as hyperhidrosis, causalgialike pain or oscillometric evidence of vasospasm, lumbar sympathectomy is helpful. By rendering the foot incapable of sweating, it is effective in controlling recurrent secondary streptococcal infections arising in chronic epidermatophytoses.[10]

2. *Femoral vein interruption.*—This procedure has been advised and good results reported.[1] The favorable results are said to be gained from the elimination of increased venous pressure in the erect position. The increased intravenous pressures result from recanalized major veins in which the valves are no longer effective and a long column of blood exerts its hydrostatic pressure on its lowest point, generally near the malleoli in the lower leg. When the major vein is ligated, it is presumed that venous return will be by way of

normal collaterals, possibly uninvolved by the original process.

In my experience, this procedure has yielded poor results. Judging from clinical, but practical, criteria, no decrease in edema, little or no improvement in healing of ulcers or decrease in recurrent ulceration has occurred. In our series, based upon healing of ulceration alone, twenty-one of twenty-seven patients having femoral vein interruption for this syndrome, were classified as having a poor result. Six were classified as a fair result, and none as good.

Physiologically, it appears unsound to treat a state which results from venous obstruction and inadequate return by further retarding the venous circulation. There, generally, is little assurance that a recanalized vein contributes significantly to increased venous pressure,[8] or that collateral circulation which may also have been greatly damaged by the original process, is capable of returning the blood without "back pressure."

3. *Excision of the Ulcer.*—Early treatment of ulceration is well known. Bed rest, elevation, warm moist dressings and topical antibiotics are effective in controlling edema and infection and improving venous return. Ambulatory treatment with firm elastic support is sufficient in many cases to control edema and allow healing to occur. Gelatin boots, reinforced with elastic bandages, are usually the most effective. In a smaller percentage of cases, the ulcer is so large that satisfactory results are not gained from conservative efforts to heal it. In many, secondary varicose veins contribute further to venous insufficiency and must be adequately removed. This is best accomplished by "in continuity" excision with the ulcer followed by split thickness skin grafts. In many, the varicose veins are not seen but only felt by the palpating finger as being troughs or canals, almost completely surrounded by dense subcutaneous fibrosis. Elastic support by bandages or stockings in this type are ineffective through inability of the compressive force to occlude the vein. Excision of the ulcer should include all of the densely fibrotic area down to and including the deep fascia, if this is involved. A high percentage of recurrences can be anticipated if "the new way of life" philosophy is not adopted.

RADICAL EXCISION

Some patients exhibit massive lymphedema, with or without ulceration, as the most prominent feature of the post-thrombotic state. These are the most dramatic of all the sequelae, frequently resulting in huge elephant like extremities, and making locomotion extremely difficult (fig. 1). Recurrent infection is a severe problem, and healing of ulcers almost impossible. For more than half a century, surgical efforts have been directed to the alleviation of these cripples but, until recently, have been to little or no avail. Most of these attempts were chiefly in an effort to create new lymphatic channels. In recent years, more radical procedures have been carried out with good results.[6] These procedures, simply stated, consist of the radical excision of the skin and all of the fibrotic subcutaneous tissue and its replacement by split thickness skin grafts. The excised portion may include the dorsum of the foot,

Fig. 2.

around joints, over bony prominences and other areas previously avoided.[11] With proper postoperative advice and continuous care and encouragement, these people can regain their former occupations with safety.

CONCLUSIONS

The sequelae of deep venous thrombosis may be severe and disabling but they are capable of being effectively treated in a high number of cases.

St. Joseph's Mercy Hospital.

BIBLIOGRAPHY

1. Linton, Robert R., and Hardy, Irad B.: Post Thrombotic Sequelae of the Lower Extremity. Treatment by Superficial Femoral Vein Interruption and Stripping of the Saphenous Veins, Surg. Clin. N. America 27:1171, 1947.
2. Luke, Major J. C.: Retrograde Venography of Deep Leg Veins, Canad. M. A. J. 49:86, 1943.
3. Warren, Richard; White, Eugene A., and Belcher, Charles D.: Venous Pressure in the Saphenous System in Normal, Varicose and Post Phlebitic Extremities, Surgery 26:435, 1949.
4. DeCamp, Paul T.; Ward, James A., and Oschner, Alton: Ambulatory Venous Pressure Studies in Post Phlebitis and other Disease States, Surgery 29:365, 1951.
5. Homans, John: The Management of Recovery from Venous Thrombosis in the Lower Limbs, Surgery 26:8, 1949.
6. Campbell, Darrell A.; Glas, Wayne W., and Musselman, Merle M.: The Surgical Treatment of Massive Lymphedema of the Lower Extremities, Surgery 30:763, 1951.
7. Hojensgard, I. C.: Sequels of Deep Thrombosis in the

Lower Limbs by Conservative Measures, Angiology 3:42, 1952.
8. Luke, Josephus C.: Evaluation of the Deep Veins following Previous Thrombophlebitis, Arch. Surg. 61:787, 1950.
9. Luke, Josephus C.: The Deep Vein Valves, Surgery 29:381, 1951.
10. Totten, H. P.: Surgical Treatment of the Post Phlebitic Leg, Angiology 4:38, 1953.
11. Path, E. J.; Barnes, S. R., and Ross, G. T.: A New Operative Treatment for Elephantiosis, Surg., Gynec. & Obst. 84:642, 1947.

Haphazard Treatment Condemned

Haphazard treatment of lesions (of the head and neck) which have not been subjected to biopsy study, with escharotics, pastes and electric needles is condemned. Pigmented lesions are best removed with the scalpel. . . . Transverse elliptical excision is used to remove nonhealing ulcers, premalignant lesions and some superficial malignant lesions of the lip. Malignant scalp lesions involving the pericranium and bone are excised with immediate skin grafting. Postirradiation recurrences are treated by operation. Carcinomas developing in irradiated areas are widely excised, with immediate or staged plastic repair.—Charles E. Lockhart, M.D., Springfield, Mo., *The American Surgeon.*

Whole Blood Still Best

. . . Another advantage of whole blood transfusions in filling the intravascular space, by emphasizing the tremendous size of the red cell mass compared to the other molecules that we might add to fill up the vascular tree . . . the size of a red cell in proportion to an albumin molecule, for example, is that of a large football stadium to a rowboat oar. It is obvious that in attempting the fill the intravascular space the red cell is the more effective substance.—Ben Eiseman, M.D., St. Louis, "A Review of Some Recent Advances in the Study of Shock," *Surgery.*

Milk in Hypoparathyroidism

Milk is not only rich in calcium but also in phosphorus, and is therefore unsuitable as a source of calcium. One to two teaspoonfuls of a 3 to 4 per cent aluminum hydroxide preparation daily is of value since it restricts the absorption of phosphorus from the gastrointestinal tract.—George A. Higgins, M.D., Kansas City, and J. W. Patterson, M.D., Wichita, "Hypoparathyriodism Following Thyroid Operations," *The American Surgeon.*

Colostomy-Colectomy in Ulcerative Colitis

. . . Transverse colostomy is the procedure of choice as the initial surgical measure in (a) acute fulminating intractable proctosigmoiditis, and (b) chronic incapacitating proctosigmoiditis complicated by perirectal abscess, multiple fistula, incontinence or stricture resulting in obstruction. Transverse colostomy with or without left hemicolectomy is the only surgical procedure necessary for these conditions. Primary colectomy is the treatment of choice for the patient in a satisfactory state of remission.—Frederick B. Campbell, M.D., and Ralph B. Samson, M.D., Kansas City, "Transverse Colostomy for Ulcerative Colitis," *Journal of the International College of Surgeons.*

LABORATORY TESTS OF THYROID FUNCTION

CHARLES M. BLACKBURN, M.D.
ROCHESTER, MINNESOTA

EITHER HYPOTHYROIDISM or hyperthyroidism in its classical form usually is readily and accurately identified by certain characteristic signs and symptoms; laboratory aid in many instances is necessary only as confirmation for the record. With respect to hyperthyroidism, however, milder or atypical forms are not recognized so readily because the clinical signs are obscure and because mild thyrotoxicosis may be simulated by a variety of other conditions. Among these are various anxiety states, cardiac disease, parkinsonism and acute alcoholism. Several tests of thyroid function are available today to the clinician who is confronted with a difficult diagnostic problem involving the thyroid gland.

An ideal diagnostic test would give positive results (abnormal findings) in every instance of the disease in question, no matter how mild or atypical; that is, it should be absolutely sensitive. It would also give unequivocally negative results (normal findings) in all normal persons and in all persons suffering from other conditions; that is, it should be absolutely specific. Unfortunately, no such perfect diagnostic test exists for any disease, nor is one likely to be developed. It is useful, however, to evaluate any diagnostic test in terms of the following two criteria: (1) sensitivity, as measured by that proportion of cases in which a test is falsely negative and (2) specificity, as measured by the frequency with which a test is found to be falsely positive in conditions other than the one in question. In addition, some diagnostic aids provide further information regarding the severity of the condition.

Among the tests of thyroid function which have had some substantial application are determinations of values for serum cholesterol and protein-bound iodine, estimation of the basal metabolic rate and use of radioactive iodine for tracer tests.

SERUM CHOLESTEROL

Determination of serum cholesterol is probably the least helpful of all laboratory aids in the diagnosis of disease of the thyroid gland. Few goitrous patients escape having it ordered and in fewer still does it provide effective diagnostic information. Values above or below the normal range are found in probably less than half these patients, particularly those having disease of mild degree, making the test an exceptionally insensitive aid in the diagnosis of hypothyroidism or hyperthyroidism. It is true, however, that decreased values have considerable specific diagnostic weight if hyperthyroidism is suspected, because few other

Read at the 95th Annual Meeting of the Missouri State Medical Association, Kansas City, April 29, 1953.
Division of Medicine, Mayo Clinic, Rochester, Minnesota.

conditions produce such a change. Likewise, increased values for serum cholesterol in a patient suspected of having hypothyroidism provide nonspecific collateral evidence in favor of this diagnosis.

BASAL METABOLIC RATE

Historically, determination of the basal metabolic rate ranks first in tests of thyroid function. For more than thirty-five years it has been the standard laboratory procedure for evaluating the function of the thyroid gland. It has the advantage of measuring what, perhaps, is the most important biologic effect of thyroid hormone, namely, its calorigenic effect, and of providing an index of the severity of the thyroid disorder, particularly with reference to hyperthyroidism.

Recently, in the first flush of the atomic age and the era of microchemistry, it has become fashionable to discount the basal metabolic rate and to rely on the diagnostic infallibility of radioiodine tracers or on the protein-bound iodine. This state of mind is understandable but nevertheless wrong. The basal metabolic rate is an extremely sensitive test for hyperthyroidism; few instances are encountered in which normal or decreased rates can be correlated with proved thyrotoxic states. The test is, unfortunately, not specific for hyperthyroidism, which is not surprising, since it measures expenditure of energy and not the function of the thyroid gland directly. Hypermetabolic states, as noted before, are found frequently in cardiac failure, hypertension, blood dyscrasias and conditions of anxiety. Therefore, an elevated basal metabolic rate does not always mean that a thyrotoxic state exists. Likewise, a decreased basal metabolic rate does not necessarily prove the presence of hypothyroidism or myxedema. Everyone is familiar with the fairly frequent finding of a decreased basal metabolic rate in the obvious absence of any other signs of hypothyroidism.

The test is technically difficult to do accurately and, furthermore, the basal state in which determination of the metabolic rate may be assumed to be reliable simply cannot be achieved in a significant proportion of neurotic patients. Nevertheless, if one is aware of the foregoing limitations, has dependable laboratory assistants and has some experience with the test, the basal metabolic rate remains extremely useful; simply because of the accumulated experience of thirty-five years, it probably is more useful than any other single laboratory aid in the diagnosis of disease of the thyroid gland.

PROTEIN-BOUND IODINE

In contrast to the basal metabolic rate, tests involving protein-bound iodine should indeed be specific, as they measure presumably the actual concentration of thyroid hormone in the peripheral blood. Many of the proponents of this test declare, possibly with more enthusiasm than accuracy, that it is not only more specific but is also a more sensitive test of thyroid function than any of its competitors. Actually, it is probably substantially less sensitive than the basal metabolic rate. In a significant number of cases of hyperthyroidism or myxedema, values for serum protein-bound iodine are within the normal range, defined by those values that include 95 per cent of normal persons, namely 3.5 to 8.5 micrograms per 100 ml. Furthermore, with regard to hyperthyroidism, determination of protein-bound iodine probably is less specific than studies utilizing radioiodine, since many ingested substances can introduce abnormal concentrations of iodine into the circulation, while extremely few situations produce abnormally great accumulations of radioiodine in the thyroid.

In reality, the value of protein-bound iodine in tests of thyroid function never has been adequately appraised in the sense that the basal metabolic rate and studies using radioiodine have been appraised. At this time it is not possible to state, for example, what proportion of patients who have Graves's disease or myxedema have values for protein-bound iodine that are outside the normal range and what proportion of abnormal values must be attributed to other conditions. Such statistical analyses currently are being carried out at the Mayo Clinic and elsewhere, but until more experience has been accumulated, this test should be interpreted in the light of the present lack of knowledge regarding it. Nevertheless, determination of protein-bound iodine has some usefulness in certain troublesome cases, because the factors that ordinarily impair the usefulness of the basal metabolic rate do not simultaneously affect protein-bound iodine, and vice versa. It is, therefore, a useful adjunct to the basal metabolic rate.

Furthermore, the ingestion of iodides and the presence of organic compounds of iodine produce spuriously high values for protein-bound iodine, while such compounds usually produce spuriously low values for I^{131}. Determination of protein-bound iodine thus is also adjunctive to studies utilizing I^{131}. Unfortunately, many people have had roentgenologic studies of the gallbladder, have received inorganic iodides for thyroid disease or in cough medicines or have received instillations of iodine compounds for roentgenologic studies of bronchi, subarachnoidal spaces or kidneys. Such persons may have falsely increased values for protein-bound iodine for long periods, namely, one or two weeks in the case of inorganic iodides, iodopyracet (diodrast) or other dyes used in excretory urography, six to twelve months in the case of iodoalphionic acid (priodax) or similar compounds used to study the gallbladder and years in the case of iodized oils (lipiodol). It would appear that similar periods of interference apply in the case of studies with radioiodine.

Determination of protein-bound iodine is an extremely difficult and treacherous procedure to carry out as a routine laboratory test. The quan-

tity of organic iodine in the blood is approximately 6 micrograms per 100 ml.; thus, this volatile element is present in a ratio of 6 parts in 100,000,000. Determination of such minute quantities is made more difficult by the fact that iodine is present normally in air, water and ordinary reagents in measurable quantities. So intricate and difficult a technical procedure can, perhaps, never be trusted entirely, and probably never will become a common and widely used clinical tool.

RADIOIODINE TRACERS

In 1953, in many quarters, it is the mode to acclaim tests using radioiodine as the most dependable measure of thyroid function, particularly in dealing with hyperthyroidism. This is perhaps true with respect to exophthalmic goiter. Tests of thyroid employing radioiodine are easy to do and are clinically reliable, providing one knows the details of their interpretation. Studies utilizing radioiodine are extraordinarily specific in the diagnosis of exophthalmic goiter unless the patient has had prior therapy with a goitrogenic drug. Unfortunately, such is not the case in hypothyroidism or myxedema. A decreased uptake of radioactive iodine does not have the same diagnostic import with regard to myxedema as does increased uptake in exophthalmic goiter. In many instances, previous administration of organic or inorganic compounds of iodine or of desiccated thyroid effectively blocks the uptake of radioiodine in both normal persons and patients who have hyperthyroidism.

In patients who have endemic or nodular goiters, the diagnosis lies sometimes between adenomatous goiter with and without hyperthyroidism. In this instance, technics utilizing radioiodine have little specificity. Many cases have been encountered in which goitrous patients who do not have hyperthyroidism have had accumulations of radioiodine above the normal range; conversely some patients who have adenomatous goiter and hyperthyroidism have normal uptakes. Without denying the relative specificity of a high uptake of radioiodine, it is possible to say that tests using radioiodine probably are less sensitive indicators of hyperthyroidism than is the basal metabolic rate. Numerous instances are found in which patients having undoubted hyperthyroidism have normal uptakes of radioiodine.

There are as many kinds and technics of tests with radioiodine as there are laboratories investigating the field. Some workers determine uptake of the thyroid gland from measurement of urinary excretion of the radioactive material. Others measure it directly in vivo. My associates and I, among others, prefer values that are calculated from serial measurements of urinary excretion, thyroid uptake or both. Radioiodine, once ingested, either collects in the thyroid or appears in the urine. The thyroid and the kidneys can be regarded as competing for it. If one measures the quantity of radioiodine in the thyroid after twenty-four hours or that in the urine after forty-eight hours it is difficult to say whether a change from the normal in either direction reflects renal or thyroid function. For this reason, measurements expressed as rates instead of quantities probably reflect thyroid function better than measurements expressed as total quantities. However, biologic variations and other complex factors make any of these methods about equally reliable.

The most explicit test of thyroid function utilizing radioiodine is probably thyroid clearance of iodine. This is calculated in the same manner as renal clearance but, because of certain technical difficulties, which at present are being overcome, this test has not been used widely for clinical purposes.

An entirely different measure of thyroid function can be obtained by the determination of radioactive protein-bound iodine at a given time after administration of radioiodine. This so-called conversion ratio, which is defined as the proportion of all radioactive iodine in the blood which is bound to protein twenty-four hours after administration, has been used extensively. Unlike other tests involving I^{131} that measure uptake of iodine by the thyroid, this technic primarily reflects hormonal secretion but is dependent on uptake as well. A critical comparison of the conversion ratio and the thyroid clearance of iodine has not yet been made, but it is evident that both technics share high specificity in the detection of Graves's disease.

CONCLUSIONS

It is apparent that no one is in a position at the present time to say which of the various laboratory tests of thyroid function is best. Certainly, technics employing I^{131} are here to stay; likewise, the basal metabolic rate is here to stay and its determination probably will remain the most widely used initial evaluation of thyroid function. None of these tests nor all of them together are better than the use by the physician of his five senses, his training and his past experience to weigh all the evidence in deciding the status of his patient's thyroid function.

Mayo Clinic.

If Dogs Voted

. . . Orthopedic surgery has made great strides in the past. It is our belief that it will do so in the future. Much of this progress has been and will be based upon animal experiments. And the animals will continue to benefit by the increase in our knowledge, because they, as well as humans, receive and benefit by treatment when they are sick or injured. . . . If dogs could vote I venture that even the least intelligent of them would vote for the continuation of animal experimentation, in the efforts of men to "extend the frontiers of human knowledge," even though they knew the subjects would not be limited to cats and rats.—J. Albert Key, M.D., St. Louis, *Bulletin of the National Society for Medical Research.*

FUNCTIONAL DISORDERS OF THE BOWEL

CARL R. FERRIS, M.D.
KANSAS CITY

A HIGH PERCENTAGE of our population suffers in varying degree from functional disorders of the intestinal tract. Many of these uncomfortable individuals never consult a physician. They rely upon self-medication often with harmful results. Dysfunction of the bowels, however, occurs, according to estimates,[1] in approximately 50 per cent of all cases presenting themselves with abdominal symptoms in gastroenterologic clinics. It is, therefore, a condition of considerable clinical importance.

Good medical management of the intestinal dysfunctions necessitates a good understanding of the normal function. Most must confess a lack of such understanding. It pleases me to quote Sara Jordan[1] as follows: "No organ of the body has been so subjected to abuse and injury as has the colon, whose finely adjusted neuromuscular mechanism and secretory apparatus have been wantonly disturbed by external interference administered under a complete misconception of the design for function provided by nature." In order to better understand the design for function provided by nature let me briefly review the physiology of the intestinal tract.

The autonomic nervous system is a regulatory mechanism by which internal organs are able to accommodate to changing functional demands. This accommodation is maintained by the delicate balance between the sympathetic and parasympathetic divisions, each of which has its separate neural network, thus providing a double enervation to smooth muscle and many secretory tissues. The intestinal tract is enervated by the parasympathetic system through the vagus nerve to the ileocolic sphincter and below this point by the sacral outflow. The sympathetic division is represented by the thoraco-lumbar nerves. The action of the vagus and the sacral parasympathetic nerves is excitatory except for the ileocolic and internal anal sphincters which are inhibited. The thoraco-lumbar outflow tends to diminish the activities of the intestinal muscles and to close the sphincters of the lower tract.

This is a complex mechanism possessing many poorly understood ramifications and syndromes. Efferent stimuli to the effector cells in the organs are believed to arise in the hypothalamus, medulla and spinal cord.[2] Stimuli of central origin pass through the hypothalamus to be transmitted to the autonomic nervous system. There is a system of reflex arcs through the medulla and the cord initiated by afferent stimuli arising in the viscera. It is through this system of reflexes that derangements in bowel function result from visceral organic disease. Likewise, functional disorders and their sequelae initiate new and different abnormalities of function throughout the entire intestinal tract. Consider the upper abdominal discomfort, eructations, bloating and even symptoms simulating peptic ulcer from anorectal disease. Almost all these same symptoms may arise from the purely functional disorders of constipation.

In the normal traverse of ingested food through the intestinal tract chyme reaches the ileum in three or four hours. The ileocolic valve is designed to permit the passage of intestinal contents into the colon while, at the same time, preventing the return into the small intestine. During the process of digestion the ileocolic valve opens rhythmically at frequent intervals and permits the ejection of small amounts of fluid to enter the cecum. The ingestion of food produces an ileocecal reflex and increases the frequency of these ejections.

In the large bowel the fecal mass moves more slowly. There are relatively prolonged periods of stasis during which time the right colon absorbs and retrieves considerable quantities of fluid for the body. After periods of stasis mass movements occur carrying feces to the descending colon and sigmoid. Here in the left colon mucus is secreted for the protection of the mucosa from injury from feces which should be semisolid. Normally, the fecal mass does not pass beyond the sigmoid into the rectum until the act of defecation is about to occur. The sigmoid is the normal reservoir for fecal matter, the rectum being merely a passage way and notification chamber.

Powerful peristaltic waves propel the fecal matter into the rectum. These powerful waves are usually initiated by the ingestion of food at breakfast. The drinking of hot water or coffee in the morning may produce them. This is known as the gastrocolic reflex. The painful colic that may occur within a moment after one swallow of hot coffee is evidence of the reflex and the violence of the peristalsis resulting. With feces in the rectum a desire to defecate soon follows. Thus, for many, defecation occurs physiologically after breakfast.

The desire to defecate is caused by distension of the rectum which initiates afferent nervous impulses that pass to the spinal cord. The act of defecation follows through the mechanism of the autonomic nervous system assisted usually by voluntary efforts. The normal act of defecation should empty the contents of the colon distal to the splenic flexure. The mere evacuation of the contents of the rectum does not necessarily complete the act of defecation. It takes a little time for the remaining mass to be propelled into the rectum, therefore, the act itself should not be hurried. A failure to respond to the desire to move the bowel is followed in a few minutes by the loss of that desire and the desire does not again occur until a further increment of fecal

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

matter enters the rectum and further distends that structure. The maintenance of normal bowel physiology depends, therefore, on adherence to the laws of nature.

In a consideration of most of the clinical conditions characterized by disturbances of the autonomic nervous system one discovers that these are the result of overstimulation of the parasympathetic division. Stimuli originating centrally, as for example from emotional disturbances, or efferent stimuli completing the reflex arc go charging down the vagus nerve or out through the sacral parasympathetics to produce intestinal hypermotility, diarrhea, constipation, mucous colitis and perhaps ulcerative colitis. On the other hand, sympathetic hypertonia may result in such conditions as ileus and megacolon.

Flatulence, in which there is an excess of gas in the bowel, can be most annoying and distressing. There are many factors in etiology. Alvarez[3] says it is due to "nervousness or a fright or a hurt." It is stated[3] that there is a mechanism which takes gas out of the bowel and sends it through the blood to the lungs where it is excreted. When a person is nervous, hurt or emotionally upset the carriage of gas is reversed, so that it goes from the lungs to the gut. All are familiar with the reflex disturbances which produce abdominal bloating associated with organic disease within the bowel, urinary tract or with manipulation of the viscera.

Many individuals have flatulence with nervousness, conditions of stress or at the time of emotional upsets. Constipation is notably associated with much flatus and with colicky pains from the accumulation of gas in the bowel. Flatulence may likewise be associated with frequent loose stools in individuals having nervous tension. The air swallower continually accumulates gas in the intestinal tract. He may not only distinguish himself with belching but he may also be uncomfortable from abdominal distension and pains. The individual who chews gum frequently fills the bowel as well as the stomach with air and is distressed without suspecting the cause. If this simple fact is remembered, the patient may be saved expensive gastrointestinal investigations.

For some years patients have been seen on occasion who complained of chest or precordial pain and in whom no evidence was found of heart or any organic disease. In some of these I was able to demonstrate by fluoroscopic examination large quantities of gas in the splenic flexure of the colon and was drawn to the conclusion that gas accumulations in this segment of the bowel were responsible for the symptoms. Articles have appeared in medical literature discussing this condition.[1, 4] Machella et al[5] have recently reported observations on the splenic flexure syndrome in which patients complained of pain or discomfort in the left upper abdomen, precordial area, chest, left shoulder, neck or arm and, in some instances associated with a sensation of choking, dyspnea, palpitation and apprehension. The symptoms were usually precipitated by emotional disturbances, were associated with constipation and were relieved by the expulsion of flatus or feces. No organic disease was found in the colons of these patients. The visualization of gas in the splenic flexure during symptoms, the absence of gas during asymptomatic periods and the reproduction of symptoms by distension of the splenic flexure by air inflation of a balloon introduced through the rectum seems to justify the conclusion that distension of the splenic flexure is responsible for the symptoms.

Diarrhea is usually a functional problem. Bockus[6] lists diarrhea of nervous origin first in the causes of chronic diarrhea. In the evaluation of the patient every precaution must be taken, however, to rule out organic disease. Alvarez[3] says that a high percentage of persons with functional diarrhea are hypersensitive, often prone to suffer from panic and fear and may frequently have relatives with similar difficulties. The diarrhea of excitement, of nervous tension or emotional upsets is frequently encountered. In this neurogenic hypermotility of the intestinal tract small intestinal motility is abnormally rapid. There are some with hypersensitive digestive tracts who, when food is eaten, get a dumping syndrome with mushy or liquid stools occurring after every meal. The diarrhea may not be accompanied with abdominal discomfort nor is mucus apt to be particularly increased. Gastrogenous diarrhea may simulate the diarrheas of nervous origin. A gastric analysis revealing the absence of achlorhydria may be necessary to make the differential diagnosis.

The clinical condition known as "mucous colitis" is a functional disorder of nervous origin characterized by the discharge of large quantities of mucus in the stools. It is usually associated with extreme spasticity of the colon. The mucus is not of inflammatory origin. Abdominal discomfort is at times quite severe. Diarrhea may occur but often there are only frequent discharges of mucus. Episodes of mucous colic may recur with periods of emotional stress or last many weeks or months at a time. Patients with mucous colitis frequently have a severe neurosis and are often refractory to treatment. They may require special psychiatric attention.

Bowel dysfunction of allergic origin is usually manifested by isolated attacks of diarrhea and abdominal pain and, less often, by severe episodes of abdominal pain, diarrhea and vomiting, associated with systemic symptoms and signs of shock. Occasionally chronic diarrhea or constipation with abdominal pain may be of allergic origin. Eosinophilia found in association with attacks may be a distinct diagnostic aid. Foods are usually the offenders though other allergens, i. e. drugs, tobacco, must be considered as possibilities. A physician can learn much about offending foods by following a rather simple outline of pro-

cedure. If the attacks occur daily or every few days they must be due to foods that are frequently eaten. If they occur only every few weeks or months they are due to a food rarely eaten. Thus, if the attacks occur infrequently the patient may keep a diary of the unusual foods eaten within a few hours before the attack. Some unusual food is likely to be reappearing in the diary after a few spells have been studied and be found to be the offender. If the patient's distress is present practically every day he can fast for forty-eight hours to see if he gets complete comfort or, if he is unwilling to fast, he can be given an elimination diet composed of a few foods seldom known to cause allergic reactions after the methods of Alvarez[3] or Andersen and others.[7] The elimination diet need not be followed longer than forty-eight hours because, if the allergen is eliminated, the symptoms may be expected to disappear within twenty-four hours. Failure of symptoms to disappear after two days on the elimination diet suggests that the symptoms are not due to food or that the offending food is among those few foods present in the testing diet. In this instance the patient may fast or try another elimination diet. In the experience of most gastroenterologists, skin testing alone has not been of much value in finding the offending allergens. The food should always be tested by being eaten.

Constipation is a great American malady. It is largely the result of the wild whirl of modern life. Rehfuss[8] has said that constipation is perhaps the greatest single medical problem of the American public after the age of 40. The average American works hard, often plays even harder, gets insufficient rest and relaxation, knows absolutely nothing about the physiology of his bowel, seldom has time to answer the call of nature and expects the bowels to move at his own convenience.

Bockus[6] lists nearly twenty etiologic factors in constipation. Constipation may be the result of, or exaggerated by, organic anal disease or organic conditions within the bowel. Most chronic constipation, however, is due to faulty bowel habits, often exaggerated by harsh laxatives and enemata.

It is obvious that elimination needs are not the same for every one. For a few the bowels move at intervals of every few days or longer. There was the perfectly normal young lady who replied, when asked if her bowels were regular, that they moved every Sunday morning. No attempt was made to change this habit. There are many individuals like this who can let the feces accumulate in the bowel for several days without symptoms of distress. On the other hand there are those who get headaches if the bowels do not move every day. For a long time I thought this was a neurosis but now I am convinced it may be true. It has been suggested that this is due to a nervous irritation of the brain and not to autointoxication.[3] Certainly many get almost immediate relief following an enema.

Constipation is responsible for many distressing symptoms. As previously stated, it is associated with flatulence and pain. Pain may occur in many different locations. The accumulation of fecal material in the rectum and sigmoid with failure of evacuation produces progressive stasis all along the colon. As stasis continues distension and pain, particularly in the cecum and in the descending colon and sigmoid, occurs. Pain in the right lower abdominal quadrant is frequently the result of fecal stasis and distension and has led to the removal of many innocent appendices. There are some who seem to constantly regurgitate and have upper abdominal distress, particularly after eating. When this occurs with constipation it may be the result of reverse peristalsis initiated reflexly by a plug of feces in the rectum.

Not infrequently patients consult the physician because of recurrent "diarrhea." Investigation reveals that these episodes of diarrhea consist of a number of large often watery stools all occurring on one day following several days without evacuations or with incomplete elimination. In truth, these patients have constipation and the episodes of loose stools cease when they are treated for constipation. Some who believe they have diarrhea because of numerous small bowel movements a day are really constipated. The distal colon is not being emptied properly.

In the treatment of constipation it is essential to familiarize the patient with the normal physiology of the bowel. He should learn the design of nature in the act of defecation. Much can be learned of the character of the problem by the type of stool. A normal stool may be described for the patient as being similar in size, shape and consistency to the peeled banana. Utilizing the mechanism of the gastrocolic reflex one or more glassfuls of hot water on arising may be helpful. He should be made to understand the importance of habit time. It is not being facetious to suggest that he take the morning paper or his favorite magazine with him to the stool daily after breakfast to spend at least ten minutes. Prune juice, prunes, figs, plums or other fruit and juices may provide just the necessary assistance. Low saline or oil enemata are permissible during the early phases of management. Antispasmodic drugs and small doses of phenobarbital are important adjuncts to treatment. A judicious choice of a mild or nonirritating laxative is acceptable in many instances as necessary to a successful program of management.

Treatment of the functional disorders of the bowel must be individualized. It is not always an easy task. It requires patience, understanding and perseverance. Instability, irritability and incoordination of the neuromuscular mechanism of the intestinal tract are the basic physiologic defects. In general, the primary objective of treatment is physiologic rest of the bowel. This is best accomplished through education and training—education in the essentials of normal physiology—training in the methods designed to restore nor-

mal physiology. Laxative abuses must be discontinued. Excesses in alcohol and tobacco may have to be eliminated. A bland diet with individual variations will help to relieve a sore and irritable bowel. Antispasmodic drugs and sedatives are of considerable value. Endocrine dysfunction may require adjustment. Sensitivities to foods, coffee and drugs and allergic reactions will require investigative procedures. Habits of living must be studied and often revised. All of this takes considerable time. The functional disorders of the bowel are, indeed, a challenge to the therapeutic ingenuity of the busy physician.

934 Argyle Building.

BIBLIOGRAPHY

1. Jordan, Sara M.: Colonic Dysfunction, New York J. Med. 49:1802 (August) 1949.
2. Lyons, Richard H., and Caliva, Francis S.: The Clinical Manifestations of Autonomic Dysfunction, New York J. Med. 50:1801 (July) 1950.
3. Alvarez, Walter C.: Functional Diseases of the Stomach and Colon, Med. Clin. N. America (January) 1953.
4. Bockus, H. L.: Gastroenterology, Philadelphia, W. B. Saunders Co., vol. 2, p. 394, 1944.
5. Machella, Thomas E.; Dworkeu, Harvey J., and Bill, F. J.: Observations on the Splenic Flexure Syndrome, Ann. Int. Med. 37:543 (September) 1952.
6. Bockus, H. L.: Gastroenterology, Philadelphia, W. B. Saunders Co., vol. 2, 1944.
7. Vaughn, Warren T., and Harvey, Black J.: Practice of Allergy, St. Louis, C. V. Mosby Co., 2nd. ed., 1948.
8. Rehfuss, M. E.: Indigestion: Its Diagnosis and Management, Philadelphia, W. B. Saunders Co., pp. 317, 322-323, 1943.

Make Medical History "Live Again"

. . . Students who decide early in life to become doctors usually channel their studies along scientific lines while they are still in secondary school. They are impatient with every course that seems to them to have no direct bearing on medicine. The humanities have little interest for them.

. . ."The soul's incentive comes from within" and if the pursuit of learning can be made an avocation, the end will be already achieved. So the problem may be simply stated: how does one reach the receptive soul to fire this great emotional urge?

As a practical approach, offering an elective course in the History of Medicine to premedical students has seemed to bear fruit where it has been tried. The premedical student is still impressionable and all things medical are of great interest to him. His eagerness affords a rare opportunity for the right teacher. The long procession of great physicians from Imhotep on can be made to live again reflected against the background of their own civilizations. These great prototypes of the educated physician cannot help but inspire emulations if properly introduced.—George A. Collett, M.D., Editorial, "The Teaching of Medical History," *Surgery, Gynecology and Obstetrics.*

Laboratory for Mixing Scientists

This place is not merely a laboratory for mixing compounds, but we do mean to make it a laboratory for mixing scientists.—The Right Hon. Lord Beveridge, K.C.B., F.B.A., Trustee of the Ciba Foundation, referring to the Ciba Foundation for the Promotion of International Co-operation in Medical and Chemical Research, London, England.

DIAGNOSIS OF PELVIC TUMORS

WILLIAM C. MIXSON, M.D.
KANSAS CITY

A COMPLETE HISTORY will often be the best means of arriving at the correct diagnosis of a pelvic tumor, once it has been encountered on pelvic examination.

Pertinent features of the history are as follows:

I. Age.
II. Menstrual History.
  A. Menorrhagia.
  B. Amenorrhea.
  C. Irregular bleeding.
  D. Postmenopausal bleeding.
III. Past History.
  A. Obstetric history.
  B. History of cervical cautery, removal of submucous myoma or salpingography.
  C. History of gonorrhea.
IV. Pain.
  A. Location.
  B. Onset.
  C. Change in character.
  D. Relationship to defecation.
  E. Relationship to coitus.

The patient's age gives a great deal of insight into the probable diagnosis of a tumor. One should never forget that in patients in the child bearing age, pregnancy, either normal or abnormal in location, should always be kept uppermost in mind in the differential diagnosis. The clinical picture is clear cut when there is a symmetrical, soft, midline, lower abdominal mass with amenorrhea. Differentiation becomes more difficult when ectopic pregnancy, pelvic inflammation and endometriosis are possibilities.

Observation and reexamination is the correct management in a patient in whom an ovarian cyst 5 cm. or smaller in diameter is encountered, provided the patient is young. The same cyst present in a patient near or past the menopause presents an altogether different situation and demands surgical intervention.

Menorrhagia or excessive bleeding at menstruation is classically a symptom of two pelvic tumors; mainly, myomata and adenomyosis. When heavy bleeding is the presenting complaint of the patient, a specific question should be directed toward the passage of clots and their size. Heavy menstrual bleeding is always associated with the passage of clots, and their size gives an indication of the degree of bleeding.

Amenorrhea, of course, leads to a preexamination diagnosis of pregnancy provided it occurs in a young individual. The amenorrhea of short duration which has been followed by irregular spotting and pain should make ectopic pregnancy prominent in the differential diagnosis and further question-

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

ing should be so directed. Fainting, weakness, pain along the rib margins, shoulder pain, frequent desire for bowel movements are all symptoms of intraperitoneal pelvic bleeding.

The extremely rare arrhenoblastoma is accompanied by amenorrhea but is associated with weight loss, hirsuitism, enlargement of the clitoris, deepening of the voice and other masculinizing changes.

Another rare but more common endocrine active tumor, the granulosa cell carcinoma, also is commonly associated with amenorrhea when occurring in the menstrual age. Both of these latter tumors are firm when encountered on pelvic examination.

Irregular bleeding or metrorrhagia is a symptom of pelvic tumor usually due to pelvic inflammation or ectopic pregnancy, a differential diagnosis which is often difficult to make and which requires laboratory aid. One should be hesitant to attribute irregular bleeding to an ovarian cyst. Certainly this can occur in the endocrine active neoplasms and from metatasis to the uterus from a cystadenocarcinoma of the ovary.

Postmenopausal bleeding, when cyclic and associated with a palpable ovarian tumor, gives rise to the suspicion of a granulosa cell tumor. The symptom of irregular bleeding in a patient, regardless of age, even if associated with an adnexal tumor and in the absence of pelvic inflammation or pregnancy, always demands preliminary curettage of the endocervix and endometrium prior to removal of the tumor. This is particularly true of the endocervix. As more effort is extended toward early diagnosis of carcinoma of the cervix, the frequency of origination of this lesion in the endocervix is more and more being appreciated. Herein lies the necessity for the preliminary curettage.

The past obstetric history is of significance when the tumor is due to inflammation. A history of an immediate postpartum course associated with chills and fever is classical. However, the same pelvic findings can occur when this clinical course has not been dramatic. Low grade elevation of temperature with abnormally high pulse rate is often the immediate picture when the sequelae of parametritis and perisalpingitis result.

Pelvic inflammation which follows cervical cautery, removal of submucous myoma or salpingography is usually a severe and acute illness. Resultant pelvic tumors are due to abscess formation or a mass made up of tube, ovary, adherent omentum and loops of small bowel. The pathogenesis is such that there will always be an associated induration and tenderness of the parametrium, usually bilateral. This history, when associated with the pelvic findings as just described, is of the utmost importance.

No matter how serious the illness, surgery has no place in its management except for extraperitoneal drainage of abscess cavities. The incriminating organism is an anaerobic streptococcus, an organism which still remains resistant to all the antibiotics.

Definite history of gonorrhea or the establishment of the diagnosis by the means of culture or smear gives insight into the diagnosis of an acute pyosalpinx with fever and elevation of the sedimentation rate or hydrosalpinx, the flaccid mass, encountered when the gonorrhea is healed.

It is self evident that pain is an important symptom of any tumor. At the same time, it should be borne in mind that pelvic tumors arising in the ovaries most often are not associated with pain. This is particularly true in women over the age of 45. It is for this reason that physical examination of women regardless of the presenting complaint should always include pelvic examination. Early diagnosis of pelvic malignancies makes mandatory bi-manual examination of the pelvic organs and biopsy of any abnormal cervical lesion.

Pain which first had its beginning during the menstrual periods and which has gradually come to be present constantly should make the physician entertain the diagnosis of endometriosis. Pain on defecation, particularly just before and during the menstrual period, also makes endometriosis a likely diagnosis.

Complete physical examination should precede the pelvic examination. At that time, special attention should be given the examination of the abdomen. It should be borne in mind that tumors which are of pelvic origin can, by virtue of a long pedicle, be palpable in the abdomen and can easily be missed at the time of bi-manual examination.

Inspection and palpation of the vagina will disclose common tumors of that locality. Small firm tumors are common in the vagina, particularly in the neighborhood of the introitus and in the area of previous repair. These are usually small dermal inclusion cysts.

Suburethral tumors are either cysts, usually arising in Skene's gland, or urethral diverticulae.

Bartholin cysts are located in the posterolateral portion of the introitus. Located in the vagina in the anterolateral portion of that structure are cysts of various size and these arise from the remnants of Gartner's duct.

The tumor located in the cul-de-sac, usually in association with other evidence of vaginal relaxation or following repair of such relaxations, is an enterocele. The classical feature of this entity, by virtue of its direct connection with the abdominal cavity, is the occurrence of an impluse on coughing.

Uterine myomata may be solitary or multiple. A solitary soft intramural myoma of the uterus cannot be distinguished on pelvic examination from a normal intra-uterine pergnancy. Either blood Friedman determination or x-ray must be resorted to in making this differential diagnosis.

The uterus which is the site of adenomyosis is enlarged symmetrically and there is an associated severe vaginal bleeding.

Hematometra and pyometra can produce a sym-

metrical enlargement of the uterus. Occurring in patients past the menopause, the latter entity is almost always the result of carcinoma of either the endocervix or endometrium. Hematometra may follow deep and ill advised cervical cautery with stenosis of the internal os in any age group.

Probably the most important feature in the consideration of pelvic tumors arising from an ovary is the constant realization that periodic enlargements of the ovary up to 5 cm. in diameter can be physiologic. Hence, the patient's age and size of tumor relationship is extremely important. The palpation of an enlarged ovary or of a cyst up to 5 cm. in diameter in a patient in the menstrual age should be managed first of all by reexamination. A large percentage of these cysts will disappear within a month. They represent simple follicle or luteal cysts of the ovary. Occurrence of a cyst in a patient who is 45 years of age or older presents an altogether different situation and demands immediate investigation. This is particularly true when the tumor is firm in consistency.

Bilateral ovarian cysts, regardless of age, should be investigated. The incidence of carcinoma in tumors which are bilateral are considerably higher.

Palpation of the cul-de-sac will be of value when ovarian cysts are present and persist. Nodular induration of either the cul-de-sac or of the uterosacral ligaments, when associated with an ovarian cyst, make the diagnosis of an endometrial cyst of the ovary highly likely.

Rectovaginal examination should always be a feature of every pelvic examination. Here the adenomyoma which is commonly present, high in the rectovaginal septum in association with pelvic endometriosis, may be palpated. In addition, the "Middledorf" tumors of neurogenic origin are best palpated with the rectal finger. There, these tumors are firm and often nodular. There is often palpable evidence of erosion of the sacrum by the tumor mass.

Specific laboratory procedures which are of value are the complete blood count, Friedman and the sedimentation rate. The hemoglobin and red count actually show the degree of blood loss experienced by the patient. Though it is recognized that the sedimentation rate can be abnormal as the result of inflammatory or malignant processes in other locations in the body, yet it can be of extreme value in the differential diagnosis of pelvic tumors. It should not only be employed for this purpose but should also be routinely employed to prevent the occurrence of pelvic inflammation by simple office cautery or following salpingography.

X-ray examination is of value in outlining the fetal skeleton. The three common tumors presenting radio-opaque areas are calcified myomas, serous ovarian cysts and dermoids. In the latter tumor, the radio-opaque areas frequently take on form as, for example, teeth and sections of the mandible.

PELVIC TUMORS COMPLICATING PREGNANCY

Parks, in 1952, presented an excellent review of the myomatous uterus complicated by pregnancy. In the discussion of this paper, Dr. Willis Brown summarized the problem with the statement "We have thus come to view the myomatous uterus as a serious threat to the whole process of reproduction rather than a complication of parturition." In his series of fifty-six patients, he found that almost one half of the patients had no viable infants either because of infertility or abortion. Most complications of pregnancy were greatly increased as a result of this lesion.

It is not uncommon to feel an ovarian cyst during early pregnancy. This may vary from a simple enlargement of one ovary to a tumor about 4 to 5 cm. in diameter. This particular change almost always represents the corpus luteum of pregnancy. Hence, when such findings are present at the initial prenatal examination, the patient should be reexamined at sixteen weeks or when she feels movement. If the ovarian cyst is still present and is not located in the true pelvis so as to produce a block of the birth canal, there is no indication for surgery. The one exception to this rule is the presence of bilateral tumors. If such a tumor is located in the true pelvis, at this time it should be removed. Most of these tumors will be found to be dermoids and if possible should be resected, leaving functioning ovarian tissue.

If the tumor is located outside the true pelvis and persists after delivery, it should be removed in the immediate puerperium.

4635 Wyandotte.

BIBLIOGRAPHY

Adson, Alfred W.; Moersch, Frederick P., and Kernohan, James W.: Neurogenic Tumors Arising From the Sacrum, Arch. Neurol. & Psychiat. **41**:535-555 (March) 1939.

Falk, Henry C., and Bunkin, Irving A.: The Management of Ovarian Tumors Complicating Pregnancy, Am. J. Obst. & Gynec. **54**:82-87 (July) 1947.

Parks, John, and Barter, Robert H.: The Myomatous Uterus Complicated by Pregnancy, Am. J. Obst. & Gynec. **63**:260-272 (February) 1952.

Mac Cahal—a Tribute

As our organization grows older, most of us realize that one of the AAGP's most valuable assets is our dynamic executive secretary, Mac Cahal. Good executive secretaries are hard to find and often take years to grow into their jobs, but the organization he heads grows with him.

. . . Seldom does one find a man with a brain . . . that can cope with all the complexities of a medical organization and at the same time be a good executive, a hard driver, and a good leader of men.

. . . Mac has supervised a good promotional job, has employed a staff in Kansas City who are cheerful, warmly friendly and efficient, has promoted the most refined educational medical publication in print, has been the guiding force in staging five top-notch scientific assemblies and has traveled from coast to coast vigorously advancing general practice principles.—"News and Views," *St. Louis Academy of General Practice Journal.*

HYDROCORTISONE ACETATE FOR LOCAL TREATMENT IN RHEUMATIC DISEASES

JACK ZUCKNER, M.D.
ST. LOUIS

HYDROCORTISONE ACETATE (compound F acetate or 17-hydroxy corticosterone-21 acetate has recently been introduced as a local form of therapy in rheumatic diseases. This hormone is produced in relatively large amounts by the adrenal gland.[1] When injected intra-articularly in patients with rheumatoid arthritis or osteoarthritis, marked subjective and objective improvement has frequently resulted.[2, 3, 4, 5, 6]

A large part of the therapeutic effort in arthritis is aimed at improving local symptoms of pain, stiffness and decreased range of motion. This is particularly so in osteoarthritis in which the disease is limited to the affected part without systemic involvement. In patients with rheumatoid arthritis marked discomfort may be present in only one or two joints, and attention is frequently directed primarily at these. The physio-therapeutic measures of heat, whirlpool, massage and exercise have often proved unsatisfactory. Other forms of local therapy have recently been attempted with the advent of the newer steroid hormones. In this respect intra-articular injections of hydrocortisone acetate have proved superior to similarly injected cortisone acetate.[2]

Thorn[7] is reported to have first injected hydrocortisone acetate into an inflammed joint of a patient with rheumatoid arthritis. Hollander et al[2] obtained excellent relief of local symptoms in patients with rheumatoid arthritis and osteoarthritis following intra-articular injections of hydrocortisone acetate. Stevenson, Zuckner and Freyberg[3] likewise noted improvement after this procedure. The latter group gave results of a thirteen month study with 746 injections in eighty-one patients, thirty-nine with rheumatoid arthritis, twenty-eight with osteoarthritis and fourteen with miscellaneous rheumatic conditions.[4] In rheumatoid arthritis greater than 50 per cent subjective improvement in pain and stiffness was noted in 70 per cent of injected joints, and greater than 50 per cent objective improvement in the degree of synovitis and range of motion in 51 per cent of treated joints. In osteoarthritic knees, results were generally the same as the rheumatoid group, but hip joints with osteoarthritis gave a poor response, with only three of fifteen hips showing some improvement. Brown et al[5] reported generally similar findings.

The procedure of injection is simple. The skin around the joint is cleansed with soap, merthiolate and alcohol. One per cent procaine is injected for local anesthesia, but in some cases this may not be necessary. If a large quantity of fluid is to be aspirated, a 20 guage needle is used; for steroid injection only, a 24 guage needle is satisfactory. All available fluid should be aspirated before injection of hydrocortisone acetate as results are usually better.[3] The knee joint can be injected readily by using the medial approach with the knee in a partially flexed and relaxed position and by directing the needle subpatellarly and inferior to the suprapatellar bursa.

Relief of symptoms usually begins in from ten to thirty-six hours after instillation of hydrocortisone acetate. Insertion of a few cubic centimeters of 1 per cent procaine into the joint at the same time is often advisable to give immediate relief of pain, but the beneficial effects from procaine do not as a rule persist more than twenty-four hours.

Duration of improvement from hydrocortisone acetate has varied with each individual and occasionally has varied with different injections in the same joint. Sustained relief, both subjectively and objectively evaluated, may persist for many weeks or months, or may disappear after only a few days. When improvement is maintained for a long period of time, other factors, such as, spontaneous remission may be responsible rather than assuming the benefit due entirely to the hormone. Injections are required every two to three weeks on an average and should be repeated when the patient shows significant subjective worsening. At the beginning of therapy, injections may have to be given every three to seven days to obtain the desired result. It is important to attempt several injections at close intervals if the response to the first intra-articular administration is not satisfactory as it is not uncommon for initial injections to give poor results, with significant improvement following a second or third injection of hormone.[6]

The optimum dosage for larger joints is 25 to 50 mgs. and for smaller (interphalangeal) joints, 5 mgs. In most instances these doses have proved as satisfactory as larger 100 mg. injections; the response to the latter is not considered great enough to warrant advocating the larger dose for practical economic therapy.[6]

Joints treated have included knees, hips, shoulders, wrists, elbows, ankles, temperomandibular, sternoclavicular, acromioclavicular and joints of the hands and feet, with knees most frequently injected. Results in hips may be unsatisfactory because of the difficulty in determining whether the injection needle is actually in the joint. Injections into ankles or tarsal joints may give poor results as one may not be able to definitely establish beforehand which joint is causing the greatest discomfort. Temperomandibular, sternoclavicular and acromioclavicular injections have been too few to evaluate their practicality.

Improvement in other than injected joints does not occur unless large doses (more than 50 mg.) of hydrocortisone acetate are given, and then the duration of beneficial effect in these joints is brief, much shorter than in the injected joint itself.[6] This systemic antirheumatic effect is to be expected if

From the Arthritis Clinics of Firmin Desloge Hospital, St. Louis University School of Medicine, Jewish Hospital, and St. Louis County Hospital.

enough hormone is absorbed into the general circulation. Joint temperatures are depressed in treated joints only,[2] and synovial fluid cell counts are lowered after intra-articular administration of hormone.[3] These facts indicate that the primary site of action of hydrocortisone acetate administered intra-articularly is local, in the treated joint.

Hydrocortisone acetate has also been injected locally in acute gouty arthritis, acute bursitis and acute traumatic synovitis with similarly good results.[5] Seventy per cent failures occured in chronic subdeltoid bursitis, and 80 per cent failures in shoulder-hand syndrome.[5] Preliminary trials in pigmented villonodular synovitis and intermittent hydroarthrosis indicate that the hormone may be of some clinical value in these pathologic conditions[6]; further work is necessary, however, to substantiate this.

Suitable candidates for this form of therapy include patients with involvement of only one or two peripheral joints, or patients with many diseased joints but having only one or two causing marked discomfort. When other medications such as cortisone and gold salts are contraindicated, some of the worse joints may be treated by local injections. Its simultaneous use with other more slowly acting forms of systemic treatment is indicated until the latter takes effect, or together with systemic measures which are not adequately controlling symptoms. Relief of pain and synovitis with intra-articular injections of hydrocortisone acetate would seem to present an ideal opportunity for an intensive program to correct associated muscle atrophy or aid in local joint rehabilitation in conjunction with orthopedic procedures.

One cannot predict in advance which patients will respond satisfactorily since results are variable. The degree of synovitis, the duration of disease and the extent of x-ray change do not aid in anticipating the type response.[6] Trial will indicate its value in each individual.

A correct diagnosis is essential before beginning therapy to avoid injecting tuberculous and pyogenic joints.

Adverse reactions to locally administered hormone are uncommon. Infrequently, the patient will complain of slightly increased pain in the treated joint the day of injection, but not severe enough to cause great discomfort. Infection and pyarthrosis must be guarded against as the suppressive action of hydrocortisone acetate on inflammatory tissue may cause difficulty in recognizing signs of infection. The disadvantages of oral or intramuscular administration of cortisone, hydrocortisone and corticotropin, such as, psychosis, elevation of blood pressure, increase in cardiac decompensation, weight gain and bleeding gastric ulcer do not occur with intra-articular hydrocortisone acetate therapy. Local rebound phenomena which may follow cessation of systemic treatment with these hormones have not been observed after intra-articular injections.

It should be emphasized, particularly in a systemic illness like rheumatoid arthritis, that this therapy is merely a local treatment. Other accepted general measures such as physiotherapy, gold salts and steroid administration should not be neglected. Effects are only palliative, not curative. Further injections are necessary in most instances.

Greater experience with the local injection of hydrocortisone acetate will be necessary to establish its long range value in the treatment of rheumatic diseases to learn if the ultimate course of disease in the treated joint can be altered. For the present, it serves as an added tool for treatment in rheumatic diseases and thus far has proved to be practical for temporary beneficial results.

SUMMARY

The local use of hydrocortisone acetate in rheumatic diseases is discussed.

Significant improvement follows intra-articular administration of the hormone in patients with rheumatoid arthritis and osteoarthritis in approximately 70 per cent of instances. Improvement also occurs after local injections in acute gouty arthritis, acute traumatic synovitis and acute bursitis. Results in osteoarthritic hips, chronic subdeltoid bursitis and shoulder-hand syndrome are generally poor.

The average dose is 25 to 50 mgs. for large joints (knees), and 5 mgs. for small joints (interphalangeal).

This treatment is only palliative and further injections are usually necessary. Accepted systemic measures of therapy should not be neglected.

4500 Olive St.

BIBLIOGRAPHY

1. Pincus, G.; Hechter, O., and Zaffaroni, A.: Effect of ACTH Upon Steroidogenesis by Isolated Perfused Adrenal Gland, in Mote, J. R.: Proceedings of the Second Clinical ACTH Conference, Blakiston, Philadelphia, 1:40-48, 1951.
2. Hollander, J. L.; Brown, E. M., Jr.; Jessar, R. A., and Brown, C. Y.: Hydrocortisone and Cortisone Injected Into Arthritic Joints, J.A.M.A. 147:1629-1635, 1951.
3. Stevenson, C. R.; Zuckner, J., and Freyberg, R. H.: Intra-articular Hydrocortisone (Compound F) Acetate—A Preliminary Report, Ann. Rheum. Dis. 2:112-118, 1952.
4. Zuckner, J.; Stevenson, C. R.; Traeger, C., and Freyberg, R. H.: Hydrocortisone Acetate for Local Therapy in Rheumatic Diseases, Read Before the Annual Meeting of the American Rheumatism Association, Chicago, Ill., June 6, 1952.
5. Brown, E. M., Jr.; Frain, J. B.; Udell, L., and Hollander, J. L.: Local Hydrocortisone in the Rheumatic Diseases; A Summary of Seventeen Months Clinical Experience, Read Before the Annual Meeting of the American Rheumatism Association, Chicago, Ill., June 6, 1952.
6. Freyberg, R. H.; Zuckner, J.; Stevenson, C. R.; Kidd, E.; Boyce, K., and Traeger, C.: Unpublished Data.
7. Thorn, G.: Cited by Hollander, J. L.[2]

Thanks

. . . We speak for the staffs of both institutions (Missouri Methodist and St. Joseph Hospitals) when we say, "Thank you for your support and stimulation. We hope we have contributed in some measure to the rounding out of your training. Good luck and God speed in your career."—"To The Interns," *Buchanan County Medical Society Bulletin.*

Postgraduate Review

PRINCIPLES OF GERIATRIC MEDICINE

WILLIAM B. KOUNTZ, M.D.
ST. LOUIS

Geriatric medicine involves a large field of medical science, much of it new to the minds of physicians. It involves medicine, psychology and, sometimes, psychiatry as well[1, 2]; it involves a knowledge of the physical and mental environment of the individual and consultation to prevent the stresses which so rapidly upset an older person,[3] and this may lead into the field of economics associated with aging. Actually, at its best, geriatric medicine involves both the arts and science of medical practice.

As one can readily see, the field is entirely too large to discuss here, and so I shall limit myself to the medical and psychologic aspects of aging.

Physicians and students in the field have long realized that the psychologic aspect of the problem is an important one. It has been clearly shown by tests on older individuals, in contrast to younger ones, that psychologic principles develop which are characteristic of their period of life. It has been emphasized that intelligence is at a higher level in the oldster while lowered resistance to life's problems is also.

Recent work with older individuals by psychologist Evelyn Mason, particularly those outside an institution, has shown that fear is a foremost psychologic factor in their everyday thinking.[4] Fear may develop to such an extent that the individual becomes uncontrollable or exhausted and unable to react normally. A number of contributory reasons exists for the psychologic state, such as fear of the future, fear of ill health which hangs like the Sword of Damocles over their heads, fear of losing economic status, fear of change of environment. She has shown, however, that the concern of these people is chiefly of ill health. To this she adds, regretfully, that the medical profession contributes to their problems "because of apparent lack of knowledge and concern, as well as unwillingness in many instances to study the problems of health of the oldster adequately."

One frequently sees individuals who have been shunted from physician to physician and have been told that nothing is wrong with them and because the individual insists that he is in poor health or that something is wrong, the physician notes him as a hypochondriac, a psychoneurotic or something even worse. It is necessary that medicine realize that disease or potential disease lurks in individuals past 40 and that physicians should study these individuals and do a better job of protecting their health.

Studies in the field have established that biologic weaknesses exist which lead to disease. The weaknesses are not the lack of antibodies and the readiness to succumb to infection which is common in childhood because the older individual has run the gauntlet of life and has built up immunization within his body. The strain of life brings about other functional disturbances, however, which lead to tissue exhaustion and disease. The mechanism that has been established as the most probable cause of disease is that of exhaustion of body tissue function. This exhaustion is a natural phenomenon since one can readily demonstrate that weakness of any body tissue may develop with prolonged overuse without sufficient rest and adequate nutrition of the cells.

Geriatric medicine, therefore, must seek its place in the maintenance of health of the older population by correction of the exhaustive processes before they have advanced too far and thus prevent diseases such as arteriosclerosis, heart disease and mental changes from developing since they bring about in infirm and unhealthy individual. Just as the infections can be prevented in the youngster and childhood illnesses controlled, health in older individuals must be controlled and degenerative body changes be prevented or modified.

The present and former attitudes in medicine have been and are to wait until specific disease entities develop before doing anything about them. A patient may have coronary thrombosis after definite assurance on the part of a physician that his heart is normal. We, as physicians, are more prone to look at the anatomic state of the body than we are to realize that disturbed body function may lead to and is always a prodromal state of anatomic disease. In order to beat anatomic disease, it is necessary to recognize its early manifestations of disturbed body function. Thus, an individual may have an attack of coronary heart disease which may be repeated from time to time and the individual becomes a miserable, marginal worker whose usefulness to himself and mankind has been reduced many fold. In fact, many of these people become wards of their families, friends or of the communities in which they live. It is my hope in this discussion to bring out thoughts for the control of body degeneration. It is needless to say that medicine does not know all the answers in the control of degenerative disease at this time, but the period of fifteen years that has elapsed since we first started the research unit in the St. Louis infirmary and Infirmary Hospital has seen considerable advancement in the understanding of these conditions.

It has been fairly clearly established that the main problem of the patient past mid-life is failing nutrition. It is known that most individuals usually stay relatively free of endogenous degenerative disease until after the age of 40. At that

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

time it has been established that there is a loss of both calcium and protein balances as well as deficiences of both carbohydrate and lipid metabolism. There are a number of changes which parallel this decline of physiologic function. One is a rapid drop in the rate of oxygen consumption while another is a decline in activity of the glands of internal secretion, particularly of the gonads. These two principle physiologic conditions have been suggested as factors in the decline of nutrition and in the increased incidence of degenerative vascular disease.

The decline of nutrition in the oldster may in certain instances be associated with lack of food intake due to poor digestion, but since the work of Ivy[5] suggests that the disturbances of the gastrointestinal tract associated with age are not due to a primary wearing out of this system, it would appear that this group is small in number. In my experience by far the larger majority of nutritional disturbances depend upon one of two factors such as (1) the glands of internal secretion and their related enzyme systems,[6] and (2) improper food intake. It is believed that the enzymes in the tissue of the aging individual are reduced. It has been shown that the presence or absence of the enzymes of the animal body may be in direct proportion to their need. Thus, an animal that eats considerable protein will have a much higher amount of enzymes for the digestion and utilization of protein than will an animal fed on vegetables. Thus, since the need of body metabolism and, hence, the use and presence of enzymes is built upon two main factors, (1) proper food, and (2) the glands of internal secretion, it is important in geriatric medicine that one keeps these two substances supplied in adequate and proportionate amounts.

The present state of knowledge indicates that disturbance of the glands of internal secretion is directly or indirectly responsible for a great part of endogenous body degeneration. When the hormonal substances are reduced by age and strain, the body function is so disturbed that anatomic disease results. An example may be cited in the reduction of thyroid substance in the body which results in a reduction of oxidases in the body and anoxia of all tissues but particularly to the arterial walls which sensitizes the vessels for deposits of cholesterol. When this occurs and fat metabolism disturbance is present, or even under normal circumstances, the vessel wall will receive the cholesterol substance and produce the anatomic picture of arteriosclerosis. Recognizing the deficiency of thyroid function and treatment with thyroid increases the enzymes and oxygenation and prevents vessel wall sensitization and inhibits arterial degeneration with its sequelae such as intracranial hemorrhage and coronary thrombosis. There is evidence that other endocrine substances play an important role in control of normal state of the arterial wall, notably the folliculoids, or female sex hormones. The influence of the factors which enable the body to burn fat may also be important in the control of arteriosclerosis.

The question of what can be done about degenerative body changes has long been of concern. Some feel that the disease processes of old age are a fixed procedure, and that nothing can be done once the tissues have changed and that an infirm state of health must persist. Evidence has accumulated at the Infirmary Hospital of St. Louis which definitely shows that such is not the case. It has been shown that individuals, when given certain of the hormone substances in a physiologic amount, did not develop disease from their administration. It has been shown further that the administration of these substances did restore a function to tissues which they formerly had had and did also give to the tissues an anatomic appearance closely resembling that of an earlier age.

A word of caution should be inserted about the use of the endocrine substances, and the sex hormones are no exception. Before using them, careful evaluation of the individual should be done. Attempts should be made to rule out conditions which contraindicate their administration. Thus, in heart disease, thyroid should be used with extreme caution, if at all. In females who have suggestions of tumors about the cervix or other conditions which might indicate cancer, careful gynecologic examination should be done before administration of the sex hormones. Also, in the male the prostate should be examined carefully before administration, and during administration at least for a period of time. It may be unwise to give testosterone to those individuals who have nodules in the prostate. This substance must be administered carefully in those individuals who have had chronic urethritis or injury to the posterior urethra. One of the influences of androgen is to increase mucous secretions of the body and the prostate also increases its secretion. In older individuals the inability of the prostate to discharge sometimes results in a swelling of the gland which, unless watched, may cause urinary obstruction. In those individuals who do not have sexual intercourse prostatic massage may be instituted if testosterone must be given. Caution should be the watchword in the administration of all hormone substances.

What can be done by the average physician for the control of body degeneration? In the early stage of the occurrence of the phenomenon, say between the ages of 40 to 65 years, he can advise yearly examination with care taken to evaluate minor as well as major symptoms and findings. He can, in part at least, stave off anoxia of the body by controlling the rate of oxygen consumption as revealed by the basal metabolic rate. This may be done in part by the use of thyroid, iodine and the B group of vitamins, as well as by limitation of tobacco, food and alcohol.

He can control faulty lipoprotein metabolism which comes on in later life by the administration of estrogen, the need for which may be deter-

mined by the staining reaction of the epithelium of the vagina or tongue. Such administration also may lessen the load of the adrenal cortex in its adjustment in the latter period of life. He can control nitrogen loss from the body and conserve body energy by the administration of testosterone in physiological amounts. He can prescribe a diet relatively high in protein, moderate in fat and carbohydrate, particularly low in sugar if the glucose tolerance curve is persistently at variance with normal. He can determine the blood cholesterol level and, if it is above 300 mg., insist that the individual lower his fat intake if it is high, and he can administer lipotropic substances such as choline.

In the latter stage of degeneration, between 65 and 80, the physician must carry his studies on the patient even further and determine the rate of oxygen consumption, the rate of uptake by the thyroid gland of iodine, the activity of the adrenal cortex by determination of the 17-ketosteriods; other tests are the insulin tolerance technic, the glucose loading test for the pancreas and pituitary, the calcium-phosphorus ratio and the gonadotropic substance for the anterior pituitary, the concentration of the urine for defects in the posterior pituitary and other general function tests of the body. Defects in any of these systems may be modified.

The diet should depend on the established physiologic need of each individual. A high protein intake consisting of from 1.2 to 1.5 grams per kilogram of body weight per day is important. No sugar is advised including fruit juices or any food with a degree of sweetness that will raise the blood sugar rapidly. Vegetables and fruits of most types are considered important. Fat in the diet is desirable with moderation up to 80 grams, depending upon the degree of overweight, if any. Minerals including calcium, phosphorus and the trace minerals are advised. Vitamins such as thiamine, riboflavin and ascorbic acid are indicated to supplement the food intake in most individuals.

The medical care, although of prime importance, is not the only factor in the control of health of the older person. Physical activity and rehabilitation are important considerations. Encouraging individuals to be active physically leads also to mental activity. Interest in one's environment and realizing that he is important in society, particularly with those whom he holds dear, are stimulating adjuncts to the health of the older person. However, since the secret of both physical activity and mental alertness lies in the maintenance of good health, the medical aspect of this problem is far more important than any other in the field and it should be so treated by physicians.

SUMMARY

The aims and principles of geriatric medicine are presented in brief. The main purpose of this field is to extend health to the large group of individuals past middle age who have inadequate total evaluation and care. Factors are suggested which, in our experience, will aid in control of health for the older person.

4500 Olive St.

BIBLIOGRAPHY

1. O'Leary, J. L.: Ageing in the Nervous System: in Cowdry's, Problems of Ageing, edited by A. I. Lansing, pp. 223-238, 1951, The Williams & Wilkins Co., Baltimore.
2. Miles, W. R., and Miles, C. C.: Principal Mental Changes with Normal Aging: in E. J. Stieglitz, Geriatric Medicine, pp. 99-117, 1943, W. B. Saunders Co., Philadelphia.
3. Selye, Hans: Stress. Acta, Inc., Montreal, Canada, 1950.
4. Mason, E.: Personal Communication.
5. Ivy, A. C., and Grossman, M. I.: Digestive System: in Cowdry's, Problems of Aging, edited by A. I. Lansing, pp. 481-526, 1951, The Williams & Wilkins Co., Baltimore.
6. Dempsey, E. W.: Metabolic Functions of the Endocrine Glands, Am. Rev. Physiol. 8:451-488, 1946.

Knife to Mental Hospitals

Through weeks of suspense the fight for modern mental hospitals involved the whole Legislature. Thousands of deeply interested citizens . . . applauded the final action. But, in the end, the decision that counts was made by just one man. With a stroke of his pen Governor Donnelly stripped the hard won appropriations of three million dollars. This is the same governor who in his inaugural address had spoken eloquently for a program to cure the mentally ill. "The old idea of purely custodial care belongs to the past," he said. The loss of the three million dollars shoves the hospital program a long way back toward the old idea of custodial care. . . . The governor has cut the appropriations for progress almost in half. We would say that his action represents a very limited conception of progress.—Editorial, *Kansas City Star.*

Home Town Surgery?

. . . With highly trained surgeons advising that all major surgical procedures should be done in large medical centers and the rural population demanding medical care in small hospitals and medical centers in rural areas, a widening rift is apparent among the different schools of thought as to the modus operandi of providing adequate surgical care to those who need it.

. . . Adequate study of the operations performed in rural hospitals, with the study of morbidity and mortality rates incident thereto and the availability of competent consultants, seems a normal basis upon which to differentiate the types of surgical treatment that may be performed safely and adequately in the rural hospital and those which must be transported to large medical centers.—Editorial, "Surgery in Rural Hospitals: A Review of Five Years' Surgery in a Small Center," W. A. Bloom, M.D., *Journal of the International College of Surgeons.*

Carnage and Crippling

A death is a death, suffering is suffering and crippling is crippling, regardless of whether the causative agent is disease or wanton violence. Therefore, we as doctors should be more alive and alert than our fellow lay citizens to the terrific toll taken by highway accidents.—F. T. H'Doubler, M.D., *Bulletin of the Greene County Medical Society.*

Kansas City Southwest Clinical Society
31st Annual Fall Clinical Conference

MUNICIPAL AUDITORIUM—KANSAS CITY, MISSOURI
SEPTEMBER 28 THRU OCTOBER 1, 1953

Distinguished Guest Speakers

Richard B. Cattell, M.D., F.A.C.S. (Surgeon) Boston
John V. Goode, M.D., F.A.C.S. (Surgeon) Dallas
Philip J. Hodes, M.D., (Radiologist) Philadelphia
J. Hewitt Judd, M.D., F.A.C.S. (Ophthalmologist) Omaha
Joseph B. Kirsner, M.D., F.A.C.P. (Internist) Chicago
Francis D. Murphy, M.D., F.A.C.P. (Internist) Milwaukee
Alton Ochsner, M.D., F.A.C.S. (Surgeon) New Orleans
Irvine H. Page, M.D., F.A.C.P. (Internist) Cleveland
J. H. Randall, M.D., F.A.C.S. (Obstetrician-Gynecologist) Iowa City
Herbert Rattner, M.D. (Dermatologist) Chicago
Stanley P. Reimann, M.D., F.A.C.P. (Pathologist) Philadelphia
William F. Rienhoff, Jr., M.D., F.A.C.S. (Surgeon) Baltimore
Paul V. Woolley, Jr., M.D. (Pediatrician) Detroit

Panels and CPC by Guest Speakers

(Closing feature of each afternoon session)

"Bleeding in the Upper Gastrointestinal Tract"
(September 28)

Clinicopathologic Conference
(September 29)

"Jaundice"
(September 30)

"Newer Concepts in the Treatment of the Geriatric Patient"
(October 1)

This page, given here to the encouragement of postgraduate clinical education, serves medicine at other times through the messages on drug and liquor addictions of the Ralph Sanitarium, 529 Highland Avenue, Kansas City 6, Missouri. Telephone: VIctor 3624.

Case Report

THE DIAGNOSIS OF EARLY CARCINOMA OF THE PROSTATE AND ITS TREATMENT BY RADICAL PERINEAL PROSTATECTOMY

WILLIAM F. MELICK, M.D.
ST. LOUIS
AND
JOSEPH J. NARYKA, M.D.
ST. LOUIS

It is perhaps a sad reflection upon cancer detection teachings that in a large metropolitan area, boasting two medical schools, in a series of more than 600 prostatectomies one can find but twelve cases of carcinoma of the prostate that were seen early enough for radical surgery. These statistics fit in with the generally accepted view that only 1 or 2 per cent of all prostatic carcinoma cases are seen early enough for possible cure. This is particularly deplorable when one knows that the five year survival period after radical prostatectomy is at least 50 per cent.

It is all too easy to blame the patient. Carcinoma of the prostate begins in the posterior lobe and hence gives rise to no early symptoms. The obstructive urinary symptoms due to invasion of, or encroachment upon, the prostatic urethra are late, as are back pains which signify metastatic invasion. Consequently, the patient who does not present himself until he has these symptoms is almost always beyond the stage of possible cure.

What about the patient who does present himself for a routine physical examination? Does he always get a rectal examination as a part of his routine physical examination? If the rectal examination shows a suspicious appearing lesion in the prostate is it always biopsied, or is it merely "observed"? In the light of our experiences we cannot give any answer about the routine rectal examinations, but we can answer the last two questions. Usually the patient does not have a biopsy and in violation of all the rules of good cancer detection, in most cases, the patient is merely watched or put on hormonal therapy to see what will happen. Far too frequently the urologist can be condemned for not insisting upon biopsy. We have hopes that a review of our experiences might help clarify matters.

One has only to check briefly the records of most hospitals to quickly see that the operation of radical prostatectomy is not popular. Since the first description by Young[1] in 1905 of the method of radical perineal prostatectomy, it has been the subject of marked controversy. Briefly the only objections to the operation are: (1) fear of incontinence, (2) impotence, and (3) recto-urethral or recto-vesical fistula. As far as urinary incontinence is concerned, we have had in our cases only stress incontinence and in no case has this persisted more than three months. All of our cases, except one, are impotent, but this is a small price to pay for possible cure. We can well imagine that in former times a urinary fecal fistula was quite a problem. Today, with the antibiotics and improved intestinal surgery it should not be an insurmountable problem, if it does occur. To be safe we expose the prostate perineally with one finger in the rectum, and thus far have avoided cutting our finger and the rectum. The only change in the perineal procedure of any importance since its original description by Young is that of Belt.[2] This consists in dissecting under the external rectal sphincter and up the longitudinal muscle coat of the rectum. Technically, this, in our hands, has been the simplest way of exposing the prostate and has given ample room for the radical removal of the prostate, its capsule, a bladder cuff and the seminal vesicles.

Recently another method of radically removing the prostate by the retropubic approach has been described. We would not quarrel with those who prefer this route but, since one approaches the prostate from the anterior surface and cannot biopsy the suspicious area, he must make his preoperative diagnosis from either clinical suspicion or needle biopsy. We have done several radical retropubic prostatectomies in which the needle biopsy was positive and find it no easier. Thus we continue to prefer the perineal approach.

DIAGNOSIS

Since there are no early symptoms, it is obvious that only by educating physicians in general can one hope to find more operable prostatic cancer. Again, the literature gives the incidence of carcinoma of the prostate as from 14 to 46 per cent, depending upon the age group studied, 20 per cent being the most commonly accepted incidence.[3] Therefore, men over 50 years of age should have periodic, routine, rectal palpation of the prostate. The presence of a hard nodule or an area of firmer consistency should arouse suspicion. Prostatic calculi, a small focus of tuberculosis, or nonspecific infection are the most important things to be considered in the differential diagnosis. These are immaterial if one considers that it is necessary to biopsy the prostate to make any sort of an accurate diagnosis. We have seen and biopsied many patients who were given a "trial at Stilbesterol" who had no cancer and continued to do well without treatment. One might remember that prostatic calculi usually show on x-ray. We should like to add that two of the cases reported had calculi and carcinoma of the prostate, so biopsy is the only way to definitely diagnose cancer. Lest we be considered to

From the Department of Urology, St. Louis University School of Medicine, St. Louis.

be unduly repeating the word biopsy we hasten to add that unfortunately almost daily we hear that cancer of the prostate can be diagnosed mostly by rectal palpation alone. This is as sheer nonsense as it is to tell the physician that he can definitely diagnose, by palpating with one, gloved, finger, a breast nodule as cancer. If he can, he certainly does not have an early cancer. Unless one is talking about the fixed, stony hard, inoperable carcinoma of the prostate, one can only be suspicious of his rectal findings and must resort to biopsy. One other diagnostic misconception that we encounter every day is the place of cystoscopic diagnosis. In early cancer of the prostate there are absolutely no cystoscopic changes. By the time the carcinoma has invaded the entire gland giving a fixed, edematous and rigid prostatic urethra, the cancer is certainly no longer an early one.

Laboratory aids may be of value in determining operability, but not the early diagnosis. Carcinoma of the prostate so commonly metastasizes to the pelvis and spine that routine x-rays of the pelvis and spine should always be obtained. The presence of osteoblastic lesions, which the majority of prostatic cancer metastases are, is again evidence that there is no longer any possibility of cure. The use of serum phosphatase determinations is of limited value. It has been established beyond doubt that a persistently elevated acid phosphatase determination indicates prostatic cancer with metastatic involvement of bone and lymph channels.[4] No other condition known to date will give an elevated acid phosphatase. The initial work on acid phosphatase elevations in prostatic carcinoma was done by Huggins.[5] With osteoblastic metastases one may also get an elevated alkaline phosphatase. Alkaline phosphatase, however, is not specific for cancer of the prostate as elevations in it may occur in liver damage and in metabolic diseases of the bone. Nesbit and Baum[6] have reported on 1,150 cases of proven prostatic carcinoma with respect to the serum phosphatase determinations. The important points of their study are that only 20.5 per cent of the carcinoma patients with no demonstrable metastases had an elevated acid phosphatase and only 65.5 per cent of the patients with demonstrable metastases had an elevated serum acid phosphatase. Generally one may say that an elevation of the serum acid phosphatase is diagnostic of prostatic carcinoma, but if the serum acid phosphatase is not elevated, it certainly does not rule out prostatic carcinoma. From a prognostic standpoint, Nesbit and Baum's statistics show a much better survival for those patients who had a normal serum acid phosphatase level.

The question of needle biopsy has also been much debated. In our opinion this has been due to the fact that the existing needles did not secure an adequate piece of tissue. With this in mind one of us designed a new needle.[7] Since this has been available, our percentage of positive prostatic needle biopsies has greatly increased. Smith[8] has pointed out that frozen sections also leave much to be desired in diagnosis. In his series of more than 100 cases, biopsy was done and frozen sections made nineteen times with three errors. He believes that if clinical evidence is great enough on surgically exploring the prostate, one should proceed with radical removal even though the frozen section is negative. We had this experience in an earlier case which is not included in the case reports as we have no adequate follow-up. The frozen section was reported as negative, but radical removal was done with a final diagnosis of carcinoma of the prostate. This is no reflection upon the pathologist as frozen section study of prostatic slides is notoriously misleading. Indeed, from a standpoint of cancer prevention, complete prostatectomy (without removal of the bladder cuff and seminal vesicles) may be justifiable. Smith and Woodruff[9] reviewed the records of 648 patients, thirty-nine of whom had had previous prostatectomies with a diagnosis of benign hyperplasia whose surgical specimens showed cancer. To this the authors were able to add six more cases of their own, making a total of forty-five patients who later developed cancer of the prostate. They also cite the writings of eight other urologists showing that at least 8 per cent of the prostates removed surgically for benign hyperplasia on microscopic examination turn out to be cancer. We, therefore, use needle biopsy on any suspicious prostatic lesion in which there are no signs of metastases on x-ray and in which the acid phosphatase is within normal levels. If the biopsy is negative one must remember that the tissue might not have been removed from the right place in the prostate. If the clinical suspicion is great enough, perineal exposure with frozen section examination is done.

SELECTION OF CASE

In the selection of cases for possible radical prostatic surgery one must also use common sense. Life insurance charts show a life expectancy of 12 years at age 65 which falls in almost a straight line curve to a 3 year life expectancy at age 85. There would be relatively little use in attempting radical surgery unless one has some knowledge of the survival which can be expected from palliative treatment; that is, transurethral resection where necessary to relieve obstruction, orchectomy and hormonal therapy. Since Huggin's discovery of the effect of castration, enough data has accumulated to allow one to better evaluate the survival after palliative treatment. Collecting cases of about fourteen different urologists, Nesbit and Baum[10] have reported on the results of endocrine treatment of 1,818 cases of prostatic carcinoma. When metastases have not occurred, castration and diethylstilbesterol alone have approximately the same effect, but a combination of the two has a survival advantage. A fact which has not received the recognition that it deserves is that

statistical analysis shows that patients treated with estrogens did not survive any longer than an untreated control group of 795 patients. While this does not mean that castration and estrogens are valueless, it also means that there is no basis for stating that palliative therapy prolongs the life of the prostatic cancer patient. It may bring marked relief of pain, but not increased life expectancy. Glanton, Fitzpatrick, Orr and Hayward have also agreed with this finding.[11] Each case must, of course, be individualized, but since the life expectancy at age 75 is only 6 years, this probably represents the oldest age at which the operation of radical prostatectomy should be considered. It should go without saying that those patients of any age who show marked cardiac, vascular, renal or any combination of these impairments should not be considered candidates for radical prostatic surgery. The only fatality in our series of radical perineal prostatectomies was an old gentleman of 78 who died of a pulmonary embolus on the third day. On the other hand, a second case who was 77 has continued to outlive his normal life expectancy.

CLINICAL CASES

E. W., a 61 year old male, was first seen in April 1946. At that time the prostate by rectal palpation was suspicious of cancer but the x-ray showed prostatic calculi. A transurethral prostatectomy was done which was reported adenocarcinoma of the prostate. A radical perineal prostatectomy was then done through a Young incision. In February 1952 after having no difficulty with urinary control the patient returned because of dribbling. Rectal examination showed a recurrence of the cancer and the patient was put on Stilbesterol. The incontinence has cleared and he is symptom free on hormones.

W. H., a 51 year old male, was first seen in December 1947 with mild obstructive symptoms. A small fibrotic prostate was palpated and cystoscopy revealed a contracted bladder neck. A transurethral resection was done and the tissue reported as adenocarcinoma. Using Young's incision, a radical perineal prostatectomy was done. He had no incontinence following removal of the catheter and when seen October 1951 had no symptoms, rectal examination was negative, and x-rays of the pelvis and spine showed no evidence of metastases. In reply to a letter in December 1952, the patient is still symptom free.

E. L., a 60 year old male, was first seen in August 1946 because of urinary retention. The patient gave a long history of back pain for which a laminectomy had been done elsewhere six months before the present admission. A résumé from this previous physician reported a suspected tumor which was not confirmed by tissue removed at the laminectomy. Rectal examination disclosed a suspicious appearing prostate, but x-rays for mestatases were negative. The acid and alkaline phosphatase determinations were normal. After much debate a radical perineal prostatectomy was done through a Young incision. The tissue was reported as adenocarcinoma and shortly thereafter repeated x-rays showed metastases in the pelvis and spine. Castration was immediately done and the patient put on Stilbesterol. The patient had no incontinence, voided normally and got along well until July 1950 at which time he was readmitted because of uncontrolled back pain. Chordotomy was done to relieve pain, but the patient died in the postoperative period.

E. B., a 78 year old male, was admitted because of acute urinary retention. Rectal palpation disclosed a benign prostatic hypertrophy with a small nodule of carcinoma. Needle biopsy of the prostate was reported an adenocarcinoma. Because of the general good condition of the patient a radical perineal prostatectomy was done through a Belt incision in December of 1951. The patient tolerated the procedure well and was gotten out of bed on the day following operation. On the third day, however, while walking in his room, he had a pulmonary embolus with immediate death.

G. S., a 77 year old male, was admitted in January 1947 because of urinary retention. Rectal examination disclosed a benign prostatic hypertrophy with an early nodule of carcinoma. Through a Belt incision the carcinoma was resected and the rest of the hypertrophy enucleated. The patient has been followed regularly to date and has no incontinence and no evidence of cancer. He has not been castrated and has not taken any hormones. These can be utilized later if there is evidence of recurrence or metastases.

O. D., a 64 year old male, was admitted in April 1947 because of urinary frequency and nocturia. Rectal palpation of the prostate disclosed a definite prostatic cancer with invasion into the seminal vesicles. A needle biopsy was positive for adenocarcinoma. Radical perineal prostatectomy through a Belt incision was done and marked invasion of the vesicles found. For this reason, orchectomy was also done and the patient put on Stilbesterol. There was no x-ray evidence of metastases and the serum acid phosphatase was normal. He was seen in June 1947 and March 1948 and had no symptoms. There was no urinary incontinence. The patient refused further follow up after March 1948 and presumably stopped taking Stilbesterol. His wife reported that he died at home in March 1950 with severe back pain, undoubtedly due to recurrent and metastatic carcinoma of the prostate.

J. R., a 69 year old male, was admitted because of a nodule noted in the prostate on routine physical examination. A needle biopsy in August 1950 was reported as adenocarcinoma. A radical perineal prostatectomy was done through a Belt incision. In June 1952 the patient had no symptoms and no evidence of metastases.

M. M., a 60 year old male, was admitted to the hospital because his physician, Dr. John Carrier, found a small nodule in the prostate on routine physical examination. In January 1949 the prostate was exposed through a Young perineal incision and a frozen section made. This was reported as adenocarcinoma and a radical prostatectomy carried out. He had stress incontinence for the first two postoperative months but then regained perfect control. When last seen in November 1952 he was free of symptoms and there was no evidence of cancer. He is the only patient in the series who is not impotent.

H. W., a 60 year old male, was seen in November 1947 because of perineal discomfort. Examination revealed a small, suspicious nodule in the prostate. Alkaline and acid phosphatase determinations were normal. X-rays of the pelvis, spine and chest showed no evidence of metastases. The patient would not

consent to open surgery without a definite diagnosis so that a resection was done transurethrally. This was reported as adenocarcinoma and through a Young incision the prostate was radically removed. The cancer was found to invade the vesicles so that a large "V" of bladder was also removed. The patient had a stress incontinence for three months postoperatively, but then regained complete control. When last seen in December of 1952 he was symptom free and had no evidence of metastases or recurrence. He has not had castration or hormones.

W. K., a 50 year old male, was sent in because the tissue removed in a transurethral resection of a "contracted bladder neck" was reported as carcinoma. Castration was done at that time. There was no x-ray evidence of metastases and the serum acid and alkaline phosphatase determinations were normal. Through a Belt incision a radical perineal prostatectomy was done in October 1952. The patient had stress incontinence for two months before regaining perfect urinary control.

A. M., a 61 year old male, was admitted because his physician, Dr. Elmer Graul, had felt a suspicious nodule in the prostate. His history is interesting in that he had just been through a clinic where he had been labelled a psychoneurotic. His only complaint was perineal discomfort. Needle biopsy was done and the specimen reported as adenocarcinoma. Radical perineal prostatectomy was done through a Belt incision in October 1952. Inspection showed an area of carcinoma about 1.5 cm. in diameter well within the normal prostatic tissue. The patient had perfect urinary control following removal of the catheter. The serum acid and alkaline phosphatase determinations are negative as are the x-rays.

F. B., a 64 year old male, was admitted because his physician, Dr. Dave Hoffmann, found a suspicious appearing prostate on routine physical examination. Perineal exposure of the prostate was done in December 1952 and a frozen section was reported as "suspicious, but not definite." Clinically, there was little doubt since it was questionable whether the gland could be removed or not because of invasion into the right seminal vesicle. Radical perineal prostatectomy was done with great difficulty in removing all of the apparent tumor around and in the right seminal vesicle. The patient developed a urinary fistula which on investigation proved to be from the right ureter. Reimplantation of the right ureter into the bladder was done and castration carried out at the same time. He had stress incontinence for two months, but at present is voiding with perfect control.

RESULTS

In our series of twelve patients subjected to radical perineal prostatectomy (and seminal vesiculectomy) there has been only one death, and that due to pulmonary embolus. Three cases have been followed less than a year. There are three patients living and well five years postoperatively, one living and well four years and one living and well three years, all without any evidence of cancer. One case developed a recurrence six years after operation and is at present controlled by castration and Stilbesterol. One, (E. L.) died four

Table I. *Results*

Case	Initial Age	Years living without evidence of Cancer	Years living with evidence of Cancer	Death (Yrs.)	Other PO Therapy		Operative Results				Table 1. *Results*
					Castration	Hormones	Incontinence	Fistula	Stress incontinence	Diagnosis made*	Remarks
E. W.	61	5	6	0	Yes	Yes	No	No	3 Mos	TUR	Recurrence noted 5th year
W. H.	51	5	.	0	No	No	No	No	1 Mo	TUR	No clinical or lab. evidence of Cancer
G. S.	77	5	.	0	No	No	No	No	1 Wk	RP	No clinical or lab. evidence of Cancer
H. W.	60	5	.	0	No	No	No	No	1 Mo	TUR	No clinical or lab. evidence of Cancer
M. M.	60	4	.	0	No	No	No	No	0	F. S.	No clinical or lab. evidence of Cancer
J. R.	69	3	.	0	No	No	No	No	3 Mos	N. B.	No clinical or lab. evidence of Cancer
E. L.	60	0	4	4	Yes	Yes	No	No	1 Mo	F S.	Unrecognized Metastases when first seen
O. D.	64	?	4	4	No	No	No	No	0	N. B.	Refused follow-up. No known postoperative treatment
E. B.	78	.	.	PO	No	No	?	?	?	N. B.	Only operative death pulmonary emboluson 3d PO day
W. K.	50	0	.	0	Yes	No	No	No	3 Mos	TUR	These patients followed less than 1 yr. P.O.
A. M.	61	0	.	0	No	No	No	No	0	N. B.	These patients followed less than 1 yr. P.O.
F. B.	61	0	.	0	Yes	No	?	No**	0	FS	These patients followed less than 1 yr. P.O.

* TUR—Tissue removed by transurethral resection, carcinoma not suspected pre-operatively
** Ureteral fistula repaired
NB—Needle biopsy done on clinically suspicious prostate on rectal palpation
RP—Rectal palpation
FS—Frozen section made after perineal exposure

years postoperatively despite castration and Stilbesterol and it is now obvious to us that he had metastases at the time of operation. Another patient died four years postoperatively and since he refused all attempts at follow up, probably did not have castration or hormones. The results are tabulated in table 1. Four of our patients had radical perineal prostatectomy after a previous transurethral operation. Goodwin[12] has recently reported on twenty-three such cases by several different operators. His experiences are similar to ours and, where transurethral resection has been done, the radical perineal prostatectomy can usually be done with no more difficulty than one has with an unoperated case.

SUMMARY

1. Routine, periodic rectal palpation of the prostate should be done on all men, particularly those 50 years of age and older.

2. Any suspicious appearing area in the prostate should be biopsied.

3. A needle biopsy is of definite value if the limitations of the method are kept in mind.

4. In selected cases in which clinical suspicions are grave enough, perineal exposure of the prostate and frozen sections should be made.

5. Since castration and female hormones do not prolong life, every attempt should be made to carry out radical prostatectomy on all cases of early carcinoma of the prostate in which the age and general condition of the patient permits.

6. A series of twelve cases subjected to radical perineal prostatectomies is presented with one operative death and no urinary incontinence or fecal fistula.

7. While each particular case must be individualized, in general, a patient to be suitable for radical prostatic surgery should not be more than 75 years of age. The carcinoma should be limited to the prostate, there should be no demonstrable metastases on x-ray and the serum acid and alkaline phosphatase determinations should be normal.

529 N. Grand Ave.

BIBLIOGRAPHY

1. Young, H. H.: Johns Hopkins Med. Bull. **13**: 1905.
2. Belt, E.; Ebert, C. E., and Surber, A. C. Jr.: J. Urol. **41**:1, 1939.
3. Smith, G. G.: J. Urol. **64**:671, 1951.
4. Gutman, A. B., and Gutman, E. B.: Proc. Soc. Exper. Biol. **39**:529, 1938; **41**:277, 1939.
5. Huggins, C.: Physiol. Rev. **25**:281, 1945.
6. Nesbit, R., and Baum, W. C.: J.A.M.A. **145**:1321, 1951.
7. Melick, W. F.: J. Urol. **66**:408, 1951.
8. Smith, G. G.: J. Urol. **64**:671, 1950.
9. Smith, G. G., and Woodruff, L. M.: J. Urol. **63**:1077, 1950.
10. Nesbit, R., and Baum, W. C.: J.A.M.A. **143**:1317, 1950.
11. Glanton, J. B.; Fitzpatrick, R. J.; Orr, L. M., and Hayward, J. C.: South. Med. J. **45**:1094, 1952.
12. Goodwin, W. E.: J.A.M.A. **148**:799, 1952.

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
HOMER V. CAPPARELL, M.D.
LEROY E. BOSTIAN, M.D.

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

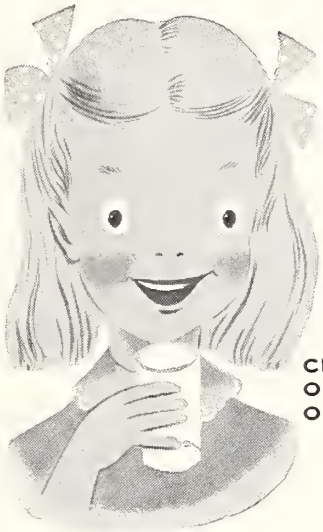
NEW

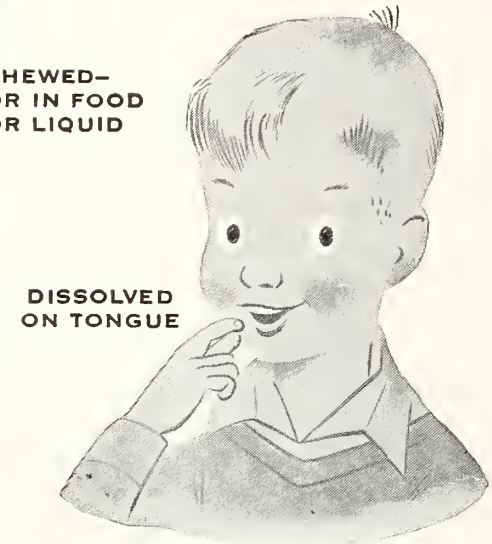
FLAVORED

CHILDREN'S SIZE

BAYER

ASPIRIN





- The Best Tasting Aspirin You Can Prescribe.
- The Flavor Remains Stable Down to the Last Tablet in the Bottle.
- 24 Tablet Bottle . . . 2½ gr. each 15¢

2½ gr. ⇨ 1¼ gr.

Grooved Tablets— Easily Halved.

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y

Special Article

HYGEIA–TODAY'S HEALTH

W. W. BAUER, M.D.
CHICAGO

A HEALTH MAGAZINE for the general public, to be sponsored by the American Medical Association is suggested in the *Transactions of the American Medical Association* for 1868. Such a magazine was established in 1923 under the name of *Hygeia,* and is now published under the title *Today's Health.*

Doctors have always realized the importance of educating their patients. Books and pamphlets of medical advice to the nonmedical reader are not new—they have been published for many years. As newer media, such as radio and television, have become available, the medical profession has embraced those. But the printed word, through magazines and pamphlets, is still an important means of communication, despite the inroads of TV upon reading.

All editors have recognized the reader appeal of health and medical articles. There is scarcely a popular magazine without its health articles or departments, or a newspaper with a health column. Many of these are excellent in form and content, serving a useful purpose in promoting general understanding of healthful living. Some have done harm through inaccuracies, distortions, premature optimisms, unwise exploitation of individuals and sensationalizing of a few facts to misrepresent a whole situation. A few have been venomous attacks on the medical profession, for purposes best known to the writers and publishers, but fairly easy to guess.

The advertising pages of the magazines and the press, too, reflect the realization that health is a universal interest. Here again most of the material has been constructive in effect, and some of it has contributed as must to healthful living habits as have the efforts of physicians and health educators. Some, of course, has been venal and unscrupulous. Some has been definitely destructive, but the better publications no longer use this type of advertising, and some of the worst types have been outlawed through the postal laws and the activities of the Federal Trade Commission.

In establishing its own magazine, the profession was actuated by the desire to have a medium through which the general public could be reached. Owned by the medical profession, the magazine would not have to return a profit, though it was hoped that it would pay its own way. It would be free to publish factual articles, and to establish rigid standards of advertising. All this would not only be a direct service to the American people, but it would also set up a standard—a yard-stick—against which other materials in this field could be evaluated.

For about twenty-five years, through two world wars and a great depression, the magazine functioned according to the concepts upon which it was founded. Slowly but surely it became the most widely read and most extensively quoted health magazine. It was the only magazine of its kind, because no others were official organs for the medical profession. It became a standard reference source in libraries and was used in schools and colleges. It never made or lost a great deal of money, but had shown an average profit of about six thousand dollars annually over this quarter century. This all went back into better magazine, and the lean years, when the balance was in the red, were underwritten by the Association.

In 1946, following World War II, sharp changes took place in the magazine publishing field, affecting all magazines. Advertising appropriations, fattened by the excess profits taxes of the war years, fell off. The advertising dollar went to the magazines with big circulations, and the smaller magazines like *Hygeia* suffered. At the same time, production costs increased sharply. The inflationary pinch on small and medium incomes caused families to cut down on their magazine subscriptions, and here again the special magazines suffered. As a last straw, television has reduced the reading time of all people by many hours weekly.

This combination of factors has caused the operating deficit of *Today's Health* to grow to an increasingly larger amount annually. The quality of the magazine has continued to improve, with more lively and attractive covers, greater diversity and better quality of articles, the introduction of cartoons and light verse, and the addition of an up-to-the-minute news section, food and health and cosmetics sections, first-aid features, guest editorials from a wide variety of health and medical sources, and some magazine "scoops" such as the story of the Donner Pass streamliner train and of the Brodie Siamese twins.

If *Today's Health* is to continue to render its best service to the public and to the medical profession, it must have the widest possible professional support. An operating loss can be conquered only by increasing advertising, this in turn depends on increased circulation. The best and most appealing circulation, from the viewpoint of the advertiser, is that of a discriminating clientele consisting of people of advanced education, good taste and financially able to afford the goods and services they desire. Such a clientele is available

Editor, *Today's Health.*

to *Today's Health*—it is the doctors and their families.

If *Today's Health* could have a subscription from every doctor for his office and another from every Auxiliary member, for the home, it would have a new and potent appeal to advertisers. These subscriptions, at special rates available, are not costly. If they duplicate too much in offices where several doctors share waiting room space, the extras can be used for gift subscriptions in hospital waiting rooms, schools, libraries, youth centers, public health clinics or anywhere people gather and have time to read. In this way the voice of the medical profession can be heard widely throughout the land.

You will see in *Today's Health* from now on more material about the American Medical Association than ever before. This decision comes out of studies made by a magazine research and advisory organization, which indicates that our readers hold the American Medical Association sponsorship of the magazine in high regard, and do not consider that we have overused it as a propaganda medium. After all, it is important that people should understand their doctors as well as that doctors should understand their patients.

The future progress of *Today's Health* depends upon the interest and support shown by the medical profession and the Auxiliary. The latter has already done wonderful things for the magazine. The appeal to do more in no way indicates lack of appreciation for what has already been done. Indeed, it is based on the assurance, born of past experience, that the Auxiliary will "deliver" when requested.

BOOK REVIEW

PHYSICIAN'S HANDBOOK, by Marcus A. Krupp, M.D., Assistant Clinical Professor of Medicine, Stanford University School of Medicine, Director, Palo Alto Medical Research Foundation, Palo Alto; Norman J. Sweet, M.D., Assistant Professor of Medicine, University of California School of Medicine, San Francisco; Ernest Jawetz, Ph.D., M.D., Associate Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco; Charles D. Armstrong, M.D., Clinical Instructor in Medicine, Stanford University School of Medicine. Seventh Edition. Lange Medical Publications, University Medical Publishers, Los Altos, California. 1952. Price $2.50.

Emanating from Stanford and the University of California, this little book is a pocket sized encyclopedia. It contains an amazing amount of concisely summarized information on routines and technics as practiced in top notch hospitals.

There is a short section on the encephalogram and a longer section on the electrocardiograph. There are tables on heights and weights, average blood pressures and laboratory tests of greater and less complexity.

Seven editions since 1941 attest to the popularity of this book. The reviewer has only one criticism: the type is rather small for easy reading. B. S. P.

KEEPING THE RECORD STRAIGHT IN MEDICAL CIVIL DEFENSE PLANNING AND OPERATIONS

CARROLL P. HUNGATE, M.D.
KANSAS CITY

IT SEEMS TRITE to repeat certain basic facts regarding medical civil defense planning and operation. Some, however, continue to confuse the objective pattern of medical civil defense, inadvertently, when defending their own circumscribed and relatively personal opinions on the modus operandi.

The medical aspects of civil defense have confronted the medical profession with the most perplexing organizational problem of the century. The development of a reasonably efficient disaster organization to operate during total disruption of normal metropolitan activities combined with the prospect, under present philosophy, of enormous numbers of serious casualty cases has tasked the ingenuity, time and energy of physicians everywhere. The great number of lay volunteers incorporated into the Medical-Health Services of Civil Defense has complicated the organizational problem.

The very name of the Service or Division—Medical-Health—indicates the dual role of the medical and ancillary groups. Under the "Medical" section most, for simplicity, think of the Casualty Services; the "Health" section concerning itself with Public Health activities. To call upon the practicing physician to assume Public Health duties per se and for the Public Health Services to be called upon to assume responsibility for the Casualty Services would but add to the confusion and result in a mediocre organization. The Medical-Health Division is a cooperative unit with practicing physicians teamed with Public Health personnel to cooperate in a joint operation of vast magnitude, each charged, in the main, with a specific responsibility. The practicing physician to care for casualties, the Public Health Service to carry out the preventive medicine program. These are their usual day to day functions in normal times and during periods of disaster.

What happens when one confuses the picture? Let us look at the Radiologic Warfare Defense problem as an example. Even at the expense of being accused of belaboring this problem the following comments must be put down for the record. So far as the Casualty Service Section of the Medical-Health Division is concerned, residual radiation from an atomic air burst will not interfere with the rescue and care of casualties. To give this fact wide publicity is necessary in order to bolster the morale and thereby the effectiveness of the Fire, Rescue, Police and Medical Sections. Why, by use of force or other means (in case of national disaster), induce emergency units to perform their duty when merely telling them the truth will suffice? If a ground burst occurs one can be thankful

because the area destroyed and the number of casualties will be greatly limited. Ground bursts are an uneconomical use of atomic weapons. They cannot be bounced about at will—uranium is hard to find and limited in amount in the first place and bombs are costly to produce in the second place. Underwater bursts would effect only a few localized costal areas. Furthermore, it has been stated that deep harbors are necessary for the complete efficiency of an underwater burst. There are no deep lagoons along our shoreline such as exist in the mid-Pacific.

The problem of induced radiation and its effect on water, food, plants and humans is not a problem for the Casualty Service, but rather a responsibility of the Public Health Section.

The emergency phase of Civil Defense must end after a period of several days. One enters then the rehabilitation stage so far as the Casualty Services are concerned. Practicing physicians will not continue on to search for areas of induced radioactivity contaminating water, soil, plants and food. That is the Public Health Officer's job.

If induced radiation is to be a hazard it is not an immediate problem for the rescue and casualty services. The induced radiation problem is a long term affair. If my sources of information are correct, positive facts on this subject are fairly few and subject to much controversy. At the moment it is largely a subject of academic interest. To mix it up with the practical aspects of rescue operations is a colossal error in judgment if one wants people to do their job during an atomic disaster.

For the protection of the public after the emergency period is over the Public Health Service will have to develop a new section—a Radiologic Contamination Section. State or regional mobile monitoring units may be the answer to economy of operation, as a part of the Medical-Health Division of State Civil Defense Agencies. Atomic experts have long ago recommended such mobile units for each state. To train personnel and develop the units is a function of State Health Departments.

A second point is the method of evacuation of casualties. The Army system has been accepted by almost 100 per cent of all Medical-Health Divisions in the United States with occasional, slight modifications. To repetitiously run this subject time and again through the mill in Civil Defense discussions is rapidly becoming wasted effort. All plans are fluid. This is a basic conception. But sometime soon certain programs or concepts must be accepted as behind us and move on to new developments in our planning and operation.

The major problems today are the recruitment and training of personnel, vigorous cooperation by physicians and ancillary groups and test runs at regularly scheduled periods during each year. A minimum of one test, and where possible, two, is required. In CPX Tests (Command Post Exercises) the major benefit is derived by the Communication Section. These tests are not practical so far as the overall Civil Defense organization is concerned. In order to make a Civil Defense test realistic it must be well planned. There should be the simulated bombing of a city by aircraft, with smoke bombs and aerial torpedoes utilized within the predetermined devastated area. Civil Defense battalions should be moved with personnel and equipment, not only within the target city, but from Mutual Aid and Mobile Support Areas. Only in this manner can one test the efficiency of the organization and evaluate the cooperation of personnel.

The entire Civil Defense organization should be tested during these exercises. Of great importance is to determine the efficiency of our Law and Order Division in the control of traffic. One will be able to evaluate the efficiency of our lieutenants. Those who are charged with specific leadership within the various echelons of our Civil Defense organization. The confusion, the noise and the sight of clouds of smoke throughout the devastated area will assist in indoctrinating the public, as a whole, to what can be expected at the time of a major catastrophe. This is psychologic indoctrination of the public and, perhaps, of greater value than any other benefit to be derived from a test run.

The program is deeply concerned with recruitment of personnel. One of the great difficulties in our program today is to be able to give an individual a specific job to do after he is recruited. Trial runs twice a year would give an opportunity to recruit personnel, assign them to a specific job, train them for six months, and sustain their interest by saying that on such and such date we will have a test run in which their services will be utilized in a practical manner.

In order to create interest among the Medical-Health personnel, medical supplies and equipment are needed, at least for training purposes. This is another priority problem in many states and target cities. Many do not have, at this time, such material for training purposes. To obtain even token funds for the purchase of medical supplies and equipment for Civil Defense from Legislatures in the majority of states has been, it appears, a difficult problem. One cannot expect, however, for doctors, nurses, and others to rush to high schools and grade schools in target cities or to move in from mobile support areas and find nothing with which to work.

The new Federal Civil Defense Administrator has an open mind on the evacuation of our target cities through a long air raid warning alert. This would, perhaps, solve the high casualty rate and be in line with what physicians have eternally advocated—a preventive program. The prospect of a saturation attack and the use of thermonuclear weapons makes the philosophy of "Don't take to the Hills" nothing short of suicide. Major emphasis on the philosophy of retaliation after attack in contrast to long air raid warning alerts, is incomprehensible. If scientists utilize their in-

genuity to develop and perfect radar warning systems or other types of warning devices to the same extent in which they have worked to develop the most destructive weapon known to man, certainly one should expect adequate warning in order to accomplish evacuation of our target cities. This may have to become a routine expectation for those who dwell within our large metropolitan areas. Again, trial runs will determine the feasibility of such an operation.

New problems will arise with evacuation such as how to billet, feed and care for the evacuees in rural areas. This, however, should be an easier problem to solve than the salvaging of scores of thousands of seriously injured and the dead.

934 Argyle Building.

Opinions stated are not the official opinion of the Navy Dept.

Captain, MC, USNR, Senior Medical Officer, U.S. Naval Air Station, Olathe, Kansas.

BOOK REVIEWS

PATHOGENESIS OF CANCER AND APPLIED THERAPY, by John E. Gregory, M.D. Bruce Humphries, Inc., Boston. Price $7.50.

The first edition of this work is a well written, short and easily read monograph dealing with a concept of a virus being the causative organism in malignant disease and the treatment thereof.

The opening chapter constitutes a historic review of the experimental work in animal malignancies and their relationships to viral agents. The author presents many electron photomicrographs which demonstrate the presence of small bodies in the cellular components of human neoplasms. These structures are thought to be viral in nature. Experimental work is described by the author wherein Koch's postulates are fulfilled in the culturing and transplanting of these organisms.

Assuming the cause of malignant diseases to be a virus of some sort, the writer describes an antibiotic preparation which he states is of value in the eradication of these diseases. Several case histories, including photographs and x-ray plates, are used to demonstrate this effect.

Several chapters are devoted to short discussions concerning the part played by such as diet, hormones and enzymes in the course of malignant disease.

The author states that these new concepts "in no way suggest that we can neglect essential and early surgery and or radiation in treating cancer."

This theory regarding the etiology of cancer and its treatment is not entirely new; however, this is the first time that I have seen such an elaborate discussion of the subject. This book should serve to stimulate the thinking of those interested in the subject of cancer. However, a great deal of confirmatory evidence must be uncovered and reproduced before these concepts can be accepted generally. J. D. G.

MANUAL OF ELECTRO CARDIOGRAPHY, by Benjamin F. Smith, M.D., Professor of Clinical Medicine, Baylor University College of Medicine; Member Active Staff and Chief of Electrocardiographic Laboratory, St. Joseph's Infirmary; Consultant in Cardiology, Veteran's Hospital; Consultant in Medicine, Hermann Hospital; Senior Associate Physician, Jefferson Davis Hospital, Houston, Texas. Elsevier Press, Inc., Houston-New York. 1952.

In the first 146 pages is a compact and well organized presentation of the principles of electrocardiography. General practicing physicians, medical students or surgeons, who are making an approach to this subject will gain down-to-earth facts, stripped of nonessentials. One term was employed which has been discontinued; namely, "preponderant" hypertrophy. It is enough to report that there is electrocardiographic evidence of hypertrophy of the left or of the right ventricle and state on what basis such interpretation is made; hence, the use of the adjective "preponderant" seems unnecessary.

In the next fifty-one pages, a correlation of electrocardiographic and autopsy findings is presented. This section is unique and should prove to be of considerable value to general practicing physicians, surgeons, medical students and house officers, as well as to internists.

The final ten pages are devoted to "Pen Pictures of Cardiology" which is, as indicated by the purpose of this manual as detailed in the introduction, which is for medical students only.

Throughout the entire 215 pages of this splendid manual are numerous electrocardiograms that have been exceedingly well chosen to illustrate the fundamentals involved. Twelve lead electrocardiograms just recently recognized as being more complete, with ample examples of unipolar limb and chest leads, enhance the value of this book over a number of larger but older texts whose illustrative electrocardiograms of standard limb and chest leads with bipolar technic only may be considered incomplete. F. Stanley Morest. M. D.

ANTIBIOTIC THERAPY by Henry Welch, Ph.D., Director, Division of Antibiotics, Food and Drug Administration, Federal Security Agency of the United States Government, and Charles N. Lewis, M.D., Medical Officer, Division of Antibiotics, Food and Drug Administration, Federal Security Agency of the United States Government. Foreword by Chester S. Keefer, M.D., Wade Professor of Medicine, Boston University School of Medicine, Chairman, Committee on Medicine and Chairman, Committee on Chemotherapy of the National Research Council. Published by The Arundel Press. Inc., Washington, D. C. Price $10.00.

The authors discuss each antibiotic individually, with respect to antomicrobial activity, pharmacology and dosage forms. The remainder of the volume consists of chapters devoted to diseases caused by specific organisms; the purpose here is to evaluate various antibiotics in specific diseases. Although the discussions are concise the book contains more than 500 pages. The size of the volume will probably discourage its wide employment as a guide to the practicing physician. It is certainly a complete treatise on the subject of antibiotics and will be of value to specialized students of this field of medicine.

C. J. S.

"PREMARIN"

...*"sense of well-being"*...

Not only relief from menopausal distress but also "a striking improvement in the sense of well-being" was reported by all patients on "Premarin" therapy.*

"PREMARIN"® *in the menopause*

Estrogenic Substances (water-soluble) also known as Conjugated Estrogens (equine). Tablets and liquid.

*Glass, S. J., and Rosenblum, G.: J. Clin. Endocrinol. 3:95 (Feb.) 1943.

5310

Ayerst®

AYERST, McKENNA & HARRISON LIMITED • *New York, N. Y.* • *Montreal, Canada*

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

Always the Same Stumbling Block!

Several months ago, we saw a news item about the opening of a new hospital in Missouri. Eager to get full coverage for MISSOURI MEDICINE, a letter was addressed to the Mayor of the town, asking for particulars. This was his reply:

"*My dear Sir:*

"I have yours of the 3rd, relative to our new hospital, and in reply am very sorry to have to advise you that this hospital was built by Dr. N——— N———, D. O. I would presume from the D. O. that you would not want anything along that line for your paper. However, if you would want to use it, advise me, and I will be very glad to furnish you all of the information that you might want.

"For your information, (our town) does not have a Medical Doctor since the death of Dr. ————, although we have tried to get one on several different occasions. We have gone so far as to offer to finance one here. It looks now like we might get one this spring.

"If you would want any further information concerning the hospital, write me and I would be glad to furnish it.

"Very truly yours,
"————, Mayor"

Needless to say, about the only reply we could make to this information was a weak "thank you" note. But subtended beneath a superficial reading of this letter, there is a profound moral.

We once heard an active member of a small town civic organization make this statement: "My wife and I are college graduates. We are not brilliant scholars, but we are fairly well educated, with a reasonable degree of common sense. We would like to have for ourselves and for our children, grade A pasteurized milk—the best and the purest we can get. But, if in our community we can't get grade A milk, then we're gonna have to take the best we can get!"

And there you have the entire situation wrapped up in a neat little bundle. Our simple little request for information concerning this new hospital merely backfired; in Missouri there's always the same stumbling block!

VINCENT T. WILLIAMS, M.D.

The Doctor Reflects on Thought Control

The *Commercial-News,* of Danville, Illinois, enjoyed a fleeting moment of fame recently when one of its pieces hit a national radio network. A commentator reviewed an editorial entitled "The Magnificent Gesture" in the Danville newspaper, and gave it some merited praise.

The article defines the magnificent gesture as the "instances where a man flung his future to the winds for the sake of doing what he wanted to do at the moment." These are the rare moments in history when "frustrations burst the bounds." The editor cannily suggests that he does not advocate making a shambles of our society by initiating an outbreak of mass nonconformity. "But a little bit, once in awhile, is the frosting on the solid diet of living."

He mentions the London aviator who finally indulged his desire to fly under a dozen or so Thames bridges, prepared to meet the consequences. The shoe salesman who would love to tell his customer that her feet are too large for the size she had asked for, and the grocer who yearned to tell the lady that he was adding a dollar to her bill to pay for the fruit she had ruined by sticking her big thumb into it—these also are cited as candidates for the making of the magnificent gesture.

Wonder if the editor ever thought of the opportunities for such gestures that cross the doctor's threshold? One who was prepared to take the consequences could have a field day in his office, could he only know that any given day was to be his last in practice. The self-pitier, the pip-

squeak who is running away from his responsibilities, the fatty who cannot understand why his diet is not working, and countless others—these present untold opportunities for unlimbering the doctor's harried inhibitions.

Jerome I. Simon, M.D.

Balderdash

Thanks to the development of our hospital and medical care insurance (Blue Cross and private insurance companies alike) a large percentage of our population is able to carry family coverage both as to hospital care and medical service. The cost per family is surprisingly little—not far from the cost of a package of cigarettes a day.

Today we must think of our population as made up of two groups—those able to carry hospital and medical care insurance and those unable to do so. This latter group of those unable to carry insurance is relatively smaller than our former group unable to pay for hospital and medical care—relatively smaller because of the use made today of insurance at so low a cost. Those who cannot carry insurance must be a public charge just as they always have been. They do not constitute a new problem to be met with revolutionary changes. These people have always been taken care of and always will be. Of the group who can carry insurance there are a few who are too improvident and shiftless to do so. These few cases will perhaps find themselves—because of their own fault—in embarrassed circumstances. It is proposed and urged by some kind but nonthinking people that we should have state medicine so that this improvident group will not be embarrassed by lack of benefits of insurance in time of sickness. In other words, to coddle this small group and prevent them from being public charges we should embark on a program of state medicine which furnishes an inferior grade of medical practice—inferior for all groups including the group of improvident people. Everybody loses—nobody gains. The cost—though hidden—would be infinitely more than that of our good grade of medical practice today. We are underwriting Great Britain's colossal deficits from having Socialized Medicine. Who would underwrite our deficit so incurred? And to what depths would our standards of practice sink?

F. T. H'Doubler, M.D.

Management of Ureteral Stone

There may come a time when some method to dissolve urinary stones will be found, thus greatly simplifying their management; however until that time comes we are still confronted with the interesting but sometimes exasperating problem of their removal.

Severe pain is usually the outstanding symptom. This is the result of distention of the collecting system above the stone. If there is a complete obstruction and renal function ceases abruptly there will be no pain, however, regardless of the type of onset. If the obstruction is not relieved, renal function may be resumed periodically resulting in hydronephrosis that may develop silently or with intermittent pain.

Abdominal distention, nausea, vomiting and gross hematuria are other frequent symptoms. Flank tenderness and muscle spasm are common. Microscopic hematuria is the rule.

To date we have not found a drug that will completely relieve the pain associated with passage of a ureteral stone.

Excretory urography will usually give the essential information regarding function of each kidney; however, retrograde urography is unexcelled in establishment of the diagnosis. It details the uninvolved kidney, determines the site of obstruction and its type and outlines the kidney above.

Therapy to control or prevent infection should always be instigated once diagnosis is established.

Many ureteral calculi are expelled spontaneously and a considerable number can be removed transurethrally, employing any one of several methods. Ureteral dilatation up to and if possible beyond the stone is the safest procedure. It can safely be repeated at regular intervals until the stone is passed. Ureteral meatotomy is of value if a stone is impacted in the intramural ureter. Resection of the ureteral mound when the stone is impacted low in the intramural portion or at the orifice is advocated. Multiple ureteral catheters left indwelling is a good procedure. The use of baskets for forcible removal of a stone is dangerous and is used by us rarely; however, we do use a catheter loop more frequently.

Indications for surgery are a stone which is obviously too large to void (any stone more than 1 to 1½ cm. in diameter), superimposed acute kidney infection on the involved side which does not respond to treatment, progressive renal back pressure changes with advancing hydronephrosis and diminishing renal function and poor renal function in the uninvolved kidney.

Prophylaxis of stones includes fluid intake regulation, diet planning, ph regulation and certain medications such as Vitamin A, Basaljel or hyaluronidase. We also advocate routine examination for parathyroid disease.

There is no hard and fast rule which applies to the management of ureteral stones in all cases; however, we have found that this regime will suffice in the majority of instances.

Robert B. Bristow, M.D.

Fraternally Yours

Oh, Those Committees

After reading the July copy of MISSOURI MEDICINE, which contained a roster and listing of all the various individuals and groups who handle our Association's affairs, it makes one wonder (if he has the slightest inclination toward soul searching) about many phases of medical organizations, who does the work and how much work is really accomplished.

Do these committee appointments represent real and active departments; are they meant primarily to put friends' names on a list as a personal kudo; or, are they mere hang-overs from preceding generations meaning scarcely anything in the way of constructive action, and yet too well ensconced to topple over and discard. Every committee falls in one of these three categories.

It requires no great intelligence to read between the lines of some committee reports. In the first place, nothing constructive was presented for the committee. Second, in many cases, the committee members were not all there. And third, those who were there (usually the chairman and one or two members), having nothing much to stroke their beard about, "garummped" their way through an hour or two of wasted time, and then settled down to the serious business of writing out a committee report.

But that is just one kind of committee. There is the other kind which has many and serious problems confronting it. These boys really work. They spend considerable time and effort in trying to figure out the best solution to the problems confronting them. They may spend several hours in honest debate (often with a considerable modicum of hot-air thrown in), they really get agitated, get mad, and all those things, but really in a sincere, honest effort to do the right thing by their job! We salute these fellows. However, the greatest tribute to their integrity, their hard work and to their sincerity, is the results they get.

If you have your July copy, just glance over the various reports and draw your own conclusions. Obviously, every committee does not, nor need not, have world shaking decisions to make. It is conceivable that a committee may exist on paper for an entire fiscal year of the Association and not have a single, worth-while "hot potato" dumped in its lap. Perhaps in the succeeding year it may have several vexatious and controversial issues presented.

Of course, some committees may remain perfectly passive; without "looking for trouble" the chairman and his members are perfectly content to do nothing as long as nothing disturbs them. Other committee chairmen (and his members) take a more active attitude—they go out looking for trouble. For instance, they may have heard or read where a neighboring state committee has done thus and so, and it has turned out well. Perhaps their philosophy is, "maybe we had better look into this." Again, in looking over the last copy of MISSOURI MEDICINE, we see reflected, by some committees, this attitude of aggressiveness on their job.

In all medical organizations there must be a focal point, a center from which all activities of the members may be coordinated, energized, activated. We would like to pay our personal respects to those in the Executive Office of our Association, who have been acting in this capacity. We refer to Mr. Tom O'Brien, Miss Helen Penn, Mr. Ray McIntyre, and to their helpers. We think they are doing a good job, trying to work with thousands of diverse personalities, which is their job. We know these good folks are merely human, they are bound to have opinions and ideas, perhaps contrary to those of some of our members—it could not be otherwise! But, if anyone can even approximately crystallize the thoughts or the philosophies of several thousand strongly self-opinionated guys, such as we physicians are, then we believe our present Executive Office helpers can do it as well as anyone else could under the circumstances.

We hear some members griping because of "the gang who runs things." Well, the best way for each member to become a "gang-buster" is for him to do his part! Most of the time the various chairmen of committees, and those in our Executive Office, are forced to do our work for us. They will write, they will call, figuratively begging for help. And, in most instances, their only response is the cold shoulder. Either no reply is forthcoming, or, the answer starts out, "I'm very sorry that I couldn't attend the meeting; I'm very sorry I just haven't had time to do what you asked me to," or some other brush-off answer.

Therefore, whenever we hear members gripe about these matters, we're forced to the conclusion that the member has not fully informed himself on these various situations, or, that he is guilty, along with so many of us, of not actively, conscientiously carrying out whatever assignments have come his way. Let's place the blame where it belongs—on each member of our Association who fails to get in there and pitch! —V.T.W.

Missouri Medical Meetings

Sept. 27-Oct. 1: Kansas City Southwest Clinical Conference, Municipal Auditorium, Kansas City.
Oct. 12: Missouri Health Council Annual Meeting, Hotel Governor, Jefferson City.
Oct. 28-29: Missouri Academy of General Practice Annual Meeting, Hotel Governor, Jefferson City.
Dec. 1-4: American Medical Association Clinical Session, St. Louis.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

If it is a good thing for people in the same profession of people with like interests to have organizations to promote common interests, then the doctors of the state stand to gain from the activities of the two year old Missouri State Medical Secretaries and Assistants Society. Members of the society are essential members of the medical team. What busy doctor today can practice efficiently without the services of trained medical assistants and skilled medical secretaries? The basic common interest of the members of the society is to further development of their understanding of the problems of providing better care to the sick. These medical secretaries and assistants form a vital link between the doctor and his public. They are trying through their new organization to strengthen that link.

The fact finding study of medical and hospital care for the indigent of Missouri is in the process of getting under way. This study is sponsored and financed by the Missouri Health Council whose membership comprises some thirty-four state-wide organizations and thirty-five associate members made up of county health councils.

The facts to be brought to light by this study include information as to the number of medically indigent in the state, the medical services being furnished the medically indigent, the medical care needs of the medically indigent, the methods now being used over the state to handle the problem—and their relative value. The object of the study is to determine the possibility of expanding that or those effective methods to other communities or of furnishing the information that will form a basis for the development of a method or methods to fit the situations in this state.

The actual study will be made by the Institute for Research in the Social Sciences of the University of Missouri, headed by Dr. C. E. Lively. Mr. Mark Hale, under the Institute's direction, will conduct the investigation. Mr. Hale is now completing a pilot study of the problem in Cooper County.

Twenty-seven counties in rural Missouri have been selected on a statistical selection basis to be used for the study. The importance of the medical profession comes into view again in making this survey—cooperation of the doctors in these twenty-seven counties in giving needed information to those making the survey will be paramount.

Members in the News

Among other Kansas City MoMedics (and Mo-Madames) on the go during the summer: **Dr. and Mrs. Ira H. Lockwood**—Paris, **Dr. and Mrs. Ralph E. Duncan**—Europe, **Dr. and Mrs. Arthur Altringer**—Rome, **Dr. and Mrs. Edwin H. Schorer**—the Far East, **Dr. and Mrs. Clifford C. Wilson**—Eastern U. S. and Canada.

Recently installed officers of the Jackson County Medical Society are **Donald F. Coburn**, M.D., President; **James A. Jarvis**, M.D., President-elect; **William B. Cheeseman**, M.D., Secretary; **Clifford C. Wilson**, M.D., Treasurer.

Celebrating his eighty-second birthday, **Robert McE. Schauffler**, M.D., Kansas City, was the subject of a feature article by Roger Swanson in the *Kansas City Times*. Well into his fifty-sixth year of practice, Dr. Schauffler answered questions as to his possible retirement from the staff of Research Clinic: "Why, no. I love it, and I'm not under pressure. I get a great kick out of going there every day and chatting with my old friends and of giving advice and occasional examinations. Why should I retire?"

Hosts at an open house honoring **Dr. and Mrs. John G. Lapp**, Kansas City, on the occasion of their sixtieth wedding anniversary recently, were **Dr. and Mrs. Harry C. Lapp**, the son and daughter-in-law of the honored couple.

Missouri University graduate, Barnes Hospital resident, and more recently chief surgical resident at Bellevue, **Hugh Stephenson, Jr.**, M.D., has been appointed assistant professor of surgery at M.U. School of Medicine.

Park D. Crawford, Jackson County Medical Librarian for fifteen years, died suddenly of a cerebral hemorrhage at Research Hospital, Kansas City.

James W. Allee, M.D., Columbia, along with his wife and two children, was the subject of a widespread air and ground search after they were presumed lost along the Osage Fork River. Their disappearance was solved when it was discovered that they had abandoned their float trip because of rain, and had spent the night in a Lebanon tourist court.

Under a new Defense Department reorganization plan, President Eisenhower nominated **Melvin A. Casberg**, M.D., as an Assistant Secretary of Defense. Dr. Casberg, who has been serving as an assistant to Secretary Wilson, will continue in charge of the health and medical program.

Well known to many MoMedics and to their patients was Rev. **Robert Hodges**, Kansas City. The St. Joseph Hospital chaplain was found shot to death along a stream in Eastern Jackson County.

Springfield Medical Center MoMedic, **DeArmond Moore**, M.D., has been transferred to the Baltimore Public Hospital for further surgical training.

The Ozark Regional Heart Association held their first Annual Meeting in Springfield during the summer. MSMA President **Claude E. Bohrer**, M.D., was the featured speaker.

The only organized chapter of the American College of Surgeons in Missouri, the Southwest Missouri Chapter, held their charter presentation meeting in Joplin. Officers of the organization are **Winifred Post**, M.D., Joplin, **Durward Hall**, M.D., and **H. A. Lowe, Sr.**, M.D., both of Springfield. Guests of honor at the meeting were **Robert Elman**, M.D. and **Henry G. Schwartz**, M.D., both of St. Louis.

No significant "hot summer letdown" has been noted for **Robert M. Myers**, M.D., Kansas City. "This Business of Living" was the topic for his speech to the Kansas City, Kansas, Rotary Club, followed by the notice that he would serve through part of the summer as Interim Pastor at the Country Club Christian Church. Dr. Myers also acted as substitute for the regular minister at another Church and was speaker at the ground-breaking ceremony for still another Church.

St. Joseph station KFEQ carried the Buchanan County program "Prepaid Health Care" in mid-summer. The discussion, moderated by **M. E. Grimes**, M.D., included three local insurance executives and another physician, **Paul Knepper**, M.D.

Greene County Auxiliary members held their annual picnic at Fulbright Pumping Station near Springfield.

Springfield orthopedists **William H. Penninger**, M.D., and **William C. Francis**, M.D. have announced the opening of their office in the Medical Arts Building, that city.

Frank R. Teachenor, M.D., Kansas City, dean of Kansas City neurosurgeons, was honored by the Jackson County Medical Society when he was presented a gold key and merit award at the annual installation of officers. Also cited was David T. Beals, prominent business man, Blue Cross trustee, and executive vice president of the St. Luke's Hospital board.

Clay County Medical Society members heard **Roscoe**

When in doubt

BLUE CROSS
BLUE SHIELD

-profit hospital-medical-surgical plans sponsored by doctors

Kansas City
Saint Louis

REMEMBER that your patients are safe in selecting non-profit **Blue Cross** and **Blue Shield** for the best in health care prepayment.

There are no "hookers" in fine print in the membership contracts . . . no cumbersome forms for the member to fill out when he needs care.

A simple membership card identifies the patient, and payment is made directly to doctor and hospital, without red tape or delays.

Simplicity of operation is an outstanding feature of these community service Plans that bring the public into partnership with their physicians and hospitals.

When in doubt, you won't go wrong in recommending the protection carried by millions of Americans—non-profit Blue Cross and Blue Shield.

L. Pullen, M.D., in one of his first public appearances as M.U. Medical School Dean. Dr. Pullen clearly emphasized the need of general practice training in medical schools. At the same meeting, Professor of Medicine at M.U., **William A. Sodeman**, M.D., brought out the importance of teaching fundamentals to medical students, and the need for continuing study.

Wyeth Laboratories' Frank Garvin presented the first annual grant for assistance in developing scientific exhibits in the G.P. field to **Milton B. Casebolt**, M.D., Kansas City.

DePalma's "Clinical Orthopedics," recently published, includes a chapter on "Adolescent Flared Ribs" by **Garrett Pipkin**, M.D. The Kansas City orthopedist spent part of the summer receiving orthopedic surgical treatment.

Miss Audrey Kargus, Librarian of the St. Louis Medical Society, has been made Secretary of the Medical Library Association.

Listed as fifth for length of dividend payments by the New York Stock Exchange, Parke, Davis & Company paid their 263rd consecutive dividend on July 31.

Along with two K.U. medical students on their way to Lawrence, Kansas, for a fraternity meeting, **Maxwell G. Beery**, M.D., and **Philip G. Kaul**, M.D., both of Kansas City, were seriously injured in an automobile accident. They were hospitalized in Kansas City.

Fifteenth Annual Conference of the Missouri Valley Association of Fire Chiefs in Omaha heard **Carroll P. Hungate**, M.D., Kansas City, speak on "What Nuclear Radiation Means to the Fire Service."

"To encourage the general practitioner to add more systematically to his reference library" the Blakiston Company (New York) has introduced the Medical Book Guild of America. Requirements are for purchase of as few as four books a year, at reduced rates, after their selection by an outstanding board of editors.

Children's Mercy Hospital, Kansas City, has recently been approved for a two year residency program.

From staff member of the Farmington State Hospital, **George A. Johns**, M.D., has been appointed temporarily to fill the positions of superintendent and business manager of the state school for feeble minded and epileptics at Marshall and Carrollton. As superintendent, he succeeds the late **Dr. R. P. C. Wilson.**

Jackson County Medical Bulletin Editor, **G. Wilse Robinson, Jr.**, M.D., was operated on at St. Mary's Hospital, Kansas City, in midsummer.

New officers of the Greater Kansas City Heart association are: president, **F. Stanley Morest**, M.D.; president-elect, **T. Reid Jones**, M.D.; vice presidents, **Arnold V. Arms**, M.D., and **Harry C. Wall**, M.D.

"In response to numerous requests from physicians . . . in Kansas and in a number of cities in adjoining states" The University of Kansas Medical Center is presenting a two day course in "Radioactive Iodine in Thyroid Disease" at Stormont-Vail Hospital, Topeka, September 3 and 4.

At Hickory Hills Country Club, Springfield, **Dan Yancey**, M.D., triumphed over a field of fifty to win the Sixth Annual Greene County Medical Society Handicap Golf Tournament. Arrangements for the tournament were under the direction of **A. Denton Vail**, M.D., with **Arch Lowe, Jr.**, M.D., **Kenneth E. Knabb**, M.D., and **Stanley S. Peterson**, M.D., serving on the committee.

Recent professional announcements in Springfield included the opening of an office for general practice by **Earl D. Russell**, M.D., and the return to practice after a recent illness of neuropsychiatrist **John M. Sartin**, M.D.

Taking their cue from eminently successful PG courses presented by K. U. Medical Center last winter in St. Joseph and Joplin, the Greene County Society voted unanimously to invite the Kansans to conduct regular courses in medicine and surgery in Springfield. Tentatively the sessions will cover five hours a day, one day a month for six months beginning in October.

Hermann physician, **Carvel T. Shaw**, M.D., has discontinued practice there to enter the Army Medical Corps.

Having served a preceptorship at the Warrensburg Medical Center last year, **Keith D. Jones**, M.D., who recently completed his internship at St. Mary's Hospital, Kansas City, has returned to the Center as a staff member.

Marvin T. Haw, Jr., M.D., has left Bonne Terre for a year's residency in general surgery in Indiana.

Hospital administrator, James H. Moss, reports that the new Audrain Hospital is about 25 per cent complete and that it will be ready for occupancy about March 1.

New president of the Caruthersville Rotary Club is **Philip J. Aquino**, M.D. He has been a member of the club for more than fifteen years, during which time

he has never been charged with an absence from a meeting.

A contract has been let for the construction of an addition to the Smithville Community Hospital. The addition will house twenty more beds, and will be air conditioned as is the rest of the hospital.

The Moberly *Monitor* reports that **C. C. Dimayuga**, M.D., is the new resident physician at Wabash Hospital, Moberly. He has just completed two years residency at St. Anthony's Hospital, St. Louis.

New assistant professor of surgery at St. Louis U. is **James E. Lewis, Jr.**, M.D., a native of Mountain Grove and graduate of M.U.

M.U.'s Institute for Research in the Social Sciences has begun a two year study of medical help for the indigent of the state, under a $25,000 grant from the Missouri Health Council.

Staff members of St. Vincent's Hospital, Kansas City, pledged nearly $18 thousand at a plans meeting for a fifty-five bed addition to the hospital, according to chairman **William C. Mixson**, M.D.

An anonymous donor contributed $750 for purchase of operating room air conditioning at Bothwell Memorial Hospital, Sedalia. The matching amount was assessed against the active staff, and the Board of Trustees agreed to furnish any further funds necessary.

St. Louis University anatomy Professor, **Albert Kunz**, M.D., has just had his Fourth Edition of "The Autonomic Nervous System" published. This brings up to date the book published first in 1929, and most recently in 1945.

Paul J. Edmondson, M.D., Centralia, has left for St. Louis where he has been appointed to a residency in surgery at Missouri Baptist Hospital.

"Just another day in his regular routine" was the report in the Clinton *Democrat*, citing the completion of 50 years of practice by **E. E. Robinson**, M.D., Adrian.

Fayette's **William J. Shaw**, M.D., attended the first World Conference on Medical Education in London. Following this meeting he intends to participate in a follow-up meeting at The Hague.

At a jurisdictional meeting in Springfield, **W. H. Madison**, M.D., Marshall, for the third consecutive year, was elected Grand Master of the Most Worshipful Prince Hall Grand Lodge of Masonry for the state of Missouri.

R. E. Harrell, M.D., Lebanon, has been named to serve as State Director of the Little-Bigger League, Inc., sponsored by Optimist International.

In cooperation with the West Central Missouri Cerebral Palsy Association, the Pettis County Medical Society sponsored their second forum for the public in Sedalia. The movie "These Are Our Children" was shown, followed by discussion by Virgil Herrick and Don King, for the association, and Doctors **Al Lowe** and **Pete Siegel** for the medical society.

Recent new practices, moves and associations in Missouri include: Orthopedist, **S. L. Gernstetter**, M.D., chief of orthopedics at Poplar Bluff V.A., has opened offices for private practice in that city; **Leonard Fair**, M.D., has returned to his home-town, Chillicothe, where he will practice in association with **Melvin Grace**, M.D.; Brothers **Ben Jolly**, M.D., and **William H. Jolly**, M.D. have opened their offices in Mexico. **George Workman**, M.D., has associated with his father, **Howard Workman**, M.D., and **Carvel T. Shaw**, M.D., in Hermann. **John B. Kelly**, M.D., St. Louis, is newly located in Houston with **Scott Kramer**, M.D. **Walter B. Rugh**, M.D., has joined the St. Charles Clinic as Ob-Gyn Staff member. **Rosemary R. Larkin**, M.D., has opened her office in Kirksville as an associate of **Lois C. Wyatt**, M.D. From Wright City, **Robert Hasson**, M.D., has moved to Moberly where he will practice. Next door neighbors to the Audrain Hospital, **Lawrence** and **Kathryn Epple**, both M.D., have opened their offices in Mexico.

G. R. Wempe, M.D., formerly of Tarkio, is the new associate of **B. F. Byland**, M.D., of Maryville.

After a six months absence, **Henry M. Durst**, M.D., has returned to Fulton.

C. Souter Smith, M.D., Springfield, was the guest speaker at the Lions Club in Lebanon on July 28.

Bothwell Hospital (Sedalia) staff members took a long step toward minimizing confusion when they voted to use no abbreviations or incomplete words not found in a standard medical dictionary in the writing of hospital orders.

The fifth annual Cancer Seminar, sponsored by the Penrose Cancer Hospital and the College of American Pathologists, will be held at the Broadmoor Hotel, Colorado Springs, Colorado, September 5, 1953. Paul C. Swenson, M.D., Professor of Radiology, Jefferson Medical College, Philadelphia, and William A. Meissner, M.D., Associate Professor of Pathology, Harvard Medical School, Boston, will jointly conduct this year's Cancer Seminar.

At a recent meeting of the Missouri State Board of Medical Examiners, **William J. Shaw**, M.D., Fayette, was elected president, **Edwin C. White**, M.D., Kansas City, vice president, and **Duff S. Allen**, M.D., St. Louis, secretary-treasurer.

Against ***STAPHylococci, STREPtococci and PNEUMOcocci***

ALWAYS CONSIDER

ERYTHROCIN*

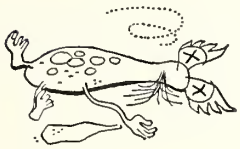
a selective action antibiotic

ORALLY EFFECTIVE

against these coccal infections—especially indicated when patients are allergic to penicillin and other antibiotics or when the organism is resistant.

A DRUG OF CHOICE

against staphylococci—because of the high incidence of staphylococcal resistance to other antibiotics.

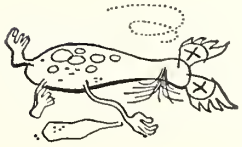


A DRUG OF CHOICE

because it does not materially alter normal intestinal flora; gastrointestinal disturbances rare; no serious side effects reported.

ADVANTAGEOUS

because the special acid-resistant coating developed by Abbott, and Abbott's built-in disintegrator, assure rapid dispersal and absorption in the upper intestinal tract.



USE ERYTHROCIN

in pharyngitis, tonsillitis, scarlet fever, pneumonia, erysipelas, osteomyelitis, pyoderma and other indicated conditions.

Abbott

* Trade Mark
Erythromycin, Abbott
Crystalline

IN MEMORIAM

Ryburn, John Patrick, M.D., St. Louis, a graduate of the National University of Arts and Sciences, 1918; member of the St. Louis Medical Society; aged 60; died June 8.

Menown, Roland R., M.D., St. Louis, a graduate of Marion-Sims College of Medicine, 1903; member of the St. Louis Medical Society; aged 73; died June 10.

Colby, Buford M., M.D., Hale, a graduate of Washington University School of Medicine, 1915; honor member of the Jackson County Medical Society; aged 64; died June 15.

Burst, Emil A., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1909; member of the St. Louis Medical Society; aged 68; died June 20.

Shelton, Harold J., M.D., St. Louis, a graduate of St. Louis University School of Medicine, 1934; member of St. Louis Medical Society; aged 46; died July 4.

Wilson, R. P. C., M.D., Platte City, a graduate of Ensworth Medical College, St. Joseph, 1900; member of the Platte County Medical Society; aged 77; died July 13.

Hall, Willis, M.D., St. Louis, a graduate of Washington University School of Medicine, 1881; honor member of the St. Louis Medical Society; aged 96; died July 27.

Brockelmann, Emmy Ross, M.D., St. Louis, a graduate of the University of Freiburg, Frankfort, Germany, 1914; member of the St. Louis Medical Society; aged 64; died July 29.

Hess, H. Lewis, M.D., Kansas City, a graduate of the University Medical College of Kansas City, 1909; honor member of the Jackson County Medical Society; aged 72; died July 29.

NEW MEMBERS

Colglazier, Mary Catherine, M.D., Kansas City
Mabrey, John P., M.D., Plattsburg
Zuckner, Jack, M.D., St. Louis

Annual Fall Conference

The Kansas City Southwest Clinical Society will present the 31st Annual Fall Clinical Conference in the Municipal Auditorium, Kansas City, Missouri, September 28 through October 1. On page 694 of this issue is the list of outstanding guest speakers.

In addition to lectures before the General Assemblies, these guests will participate in a Panel Discussion as the closing feature of each days session, excepting September 29, when the session will close with the ever popular Clinicopathologic Conference.

Color Television programs, medical and surgical, will open the morning sessions of September 29 through October 1. This program has been arranged through the courtesy of Smith, Kline & French Labs. who now televise with two cameras projected on two large screens, affording adequate vision for an audience of five hundred, simultaneously.

The entertainment of Tuesday evening will include dinner, a floor show followed by two hours of dancing in the Grand Ballroom of the Muehlebach Hotel. Bring your wife and enjoy this evening of fun and relaxation together.

GAMMA GLOBULIN DISTRIBUTION

JAMES R. AMOS, M.D., *Division Director*

Word has been received from the Public Health Service that special allocations of gamma globulin will no longer be made for contacts of poliomyelitis cases occurring in camps. Since Missouri's basic supply of gamma globulin would soon be exhausted if prophylaxis of all contacts in camps were undertaken, gamma globulin for camp contacts in the future must necessarily be restricted to those most intimately exposed as cabin mates—those regularly sleeping with the patient.

The spirit in which Missouri physicians have assisted us in carrying out a difficult task is a great credit to the profession and a source of much satisfaction to those of us having official responsibility.

Assistant Secretary of Defense to Speak in St. Louis

Melvin A. Casberg, M.D., newly appointed Assistant Secretary of Defense (Health and Medical), will speak at a special meeting of the St. Louis Medical Society on September 25 at 8:30 p.m. at the St. Louis Medical Society Building. He will speak on "Military Medicine at the Department of Defense Level."

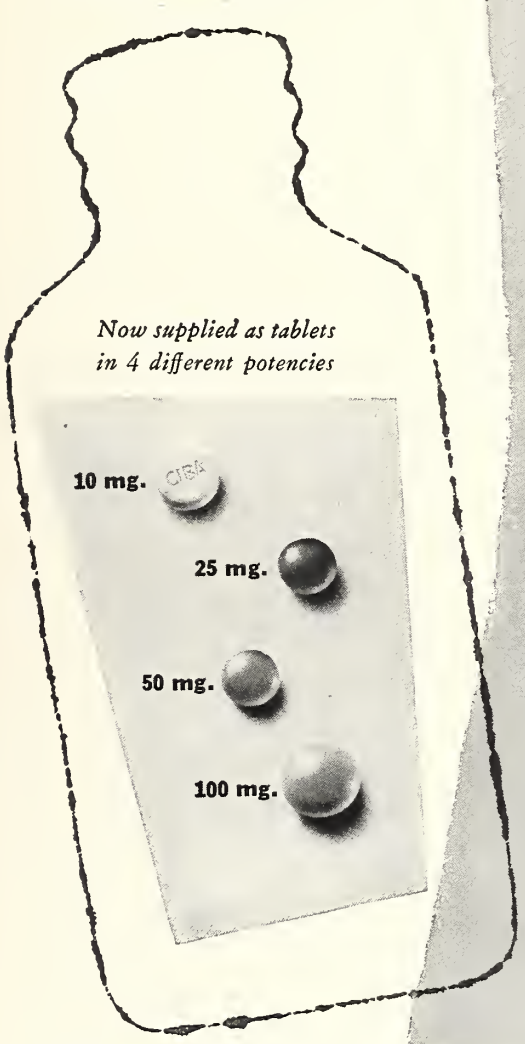
Dr. Casberg meets with the Civilian Health and Medical Advisory Council in the Office of the Secretary of Defense at the Pentagon. From left to right: Drs. Middleton, Rourke, Wilbur, Casberg, Shands, Ravdin and Hollers.

At the time Dr. Casberg was appointed Assistant to the Secretary of Defense, the Armed Forces Medical Policy Council was dissolved and the Secretary of Defense appointed a Civilian Health and Medical Advisory Council. The new Council is composed of William S. Middleton, M.D., Dean, School of Medicine, University of Wisconsin, Madison, Wisconsin; Anthony J. J. Rourke, M.D., President, Hospital Council of Greater New York, New York; Dwight Locke Wilbur, M.D., Professor of Clinical Medicine, Stanford University School of Medicine, San Francisco; Alfred R. Shands, Jr., M.D., Medical Director, the Nemours Foundation, Wilmington, Delaware; Isidor S. Ravdin, M.D., Professor of Surgery, University of Pennsylvania, Philadelphia, and James P. Hollers, M.D., San Antonio, Texas.

PRICE REDUCTION

20% PRICE REDUCTION* ON 50-MG. TABLET

20% ADDITIONAL SAVING* WITH NEW 100-MG. TABLET



Ciba

maintenance therapy with

Apresoline®

hydrochloride
(HYDRALAZINE HYDROCHLORIDE CIBA)

now costs less

Advantage may be taken of the economy and convenience of the new high potency 100-mg. tablet for maintenance therapy—provided the patient's particular dosage requirements have first been meticulously determined.

An antihypertensive agent of choice, Apresoline hydrochloride has oral efficacy, relative safety and freedom from toxicity. Even while lowering blood pressure gradually, as it does in the majority of patients, it increases renal blood flow and tends to reduce cerebral vascular tone so that cerebral circulation is not diminished. It constitutes a major advance in the treatment of hypertension.

Ciba Pharmaceutical Products, Inc.
Summit, New Jersey

*(druggist's cost)

2/1922H

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Clay County Medical Society

The Clay County Medical Society met in regular session at Rugel's Cafe, North Kansas City, on June 30. Dinner was served to both the Society and Auxiliary. Thirty-seven members and their wives were present.

Dr. **Roscoe L. Pullen**, Dean, and Dr. **William A. Sodeman**, Professor of Medicine at the University of Missouri Medical School spoke on "Problems of a Medical School" and "The Importance of Teaching Fundamentals to Medical Students."

Dr. **F. M. Waterman** and Dr. **James Willoughby**, Liberty, arranged the program.

S. R. McCracken, M.D., *Secretary*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski-Maries County Medical Society

Francis X. Paletta, M.D., St. Louis, spoke at a meeting of the Phelps-Crawford-Dent-Pulaski-Maries County Medical Society, Thursday night, July 30. He presented a good number of slides illustrating plastic surgery procedures and discussed these in a practical and effective manner.

The meeting was held in the Pine Room of the Greyhound bus station at Rolla and began with dinner at 6:30 p.m. Many of the doctor's wives adorned the meeting with their presence.

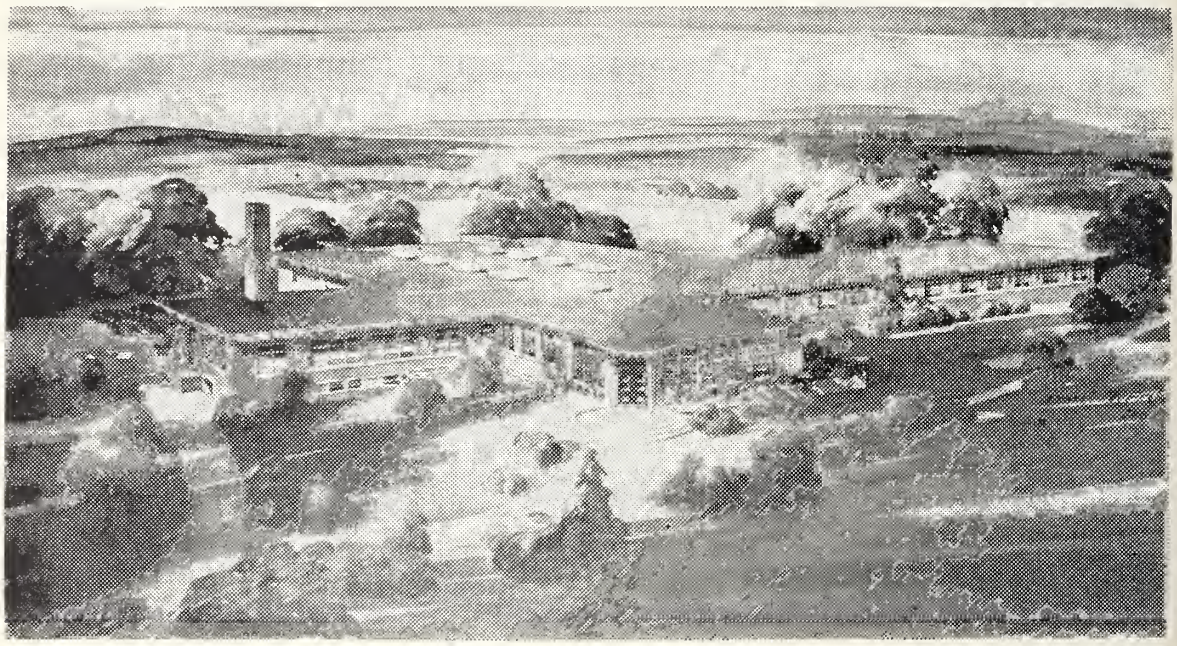
M. K. Underwood, M.D., *Secretary*

Lincoln County Hospital

A few blocks east of U. S. Highway 61 on Missouri State Highway 47, a new Lincoln County Memorial Hospital is in operation. On April 16, 1953, the hospital organization directed by a Board of Trustees of five members took on the responsibility of caring for the patients of Lincoln County.

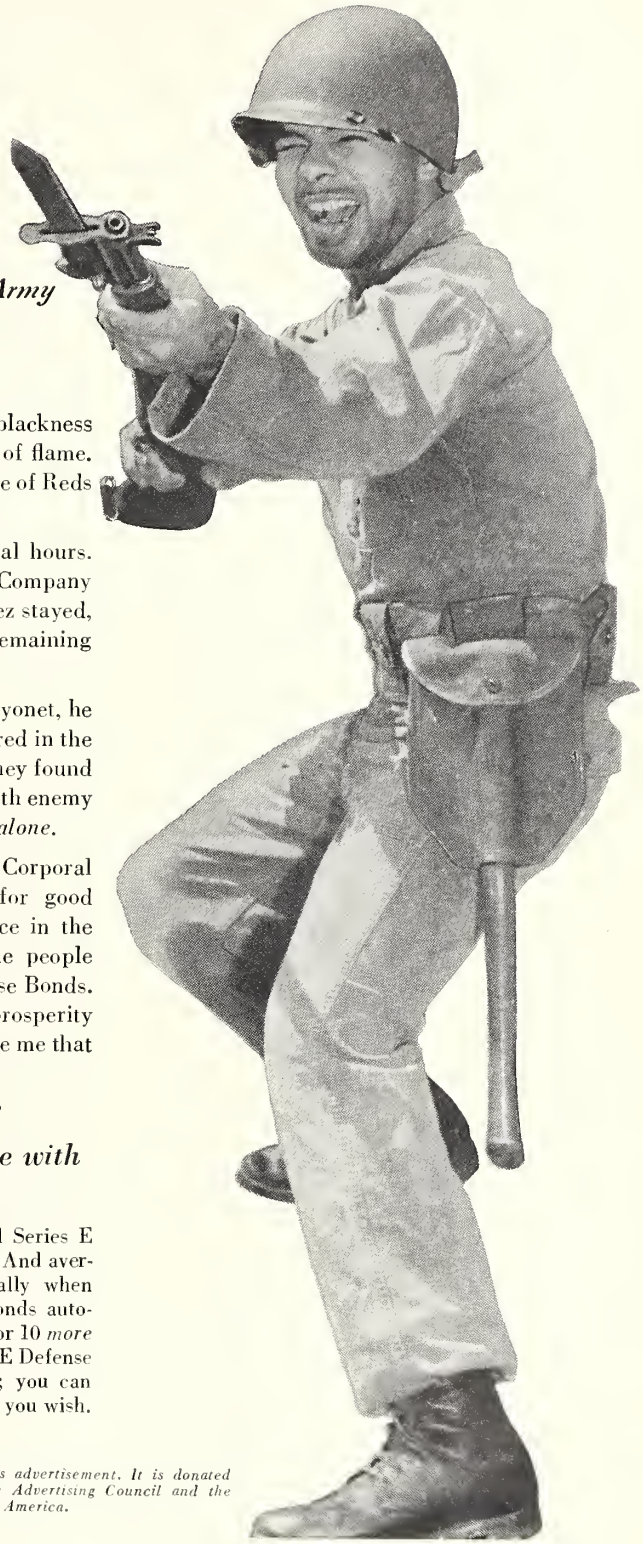
This dream, that has become a reality, was primarily started by the great interests of the Farm Bureau, which spread into many other organizations throughout the County, such as Extension Service Homemaker Clubs, Troy Chamber of Commerce, Troy Rotary Club, Kiwanis Clubs, Legion Posts, Literary Clubs and many others. However, when additional money was needed, individual citizens of the county assumed responsibility to help with this project by securing the financial needs to complete the hospital as set up by the specifications of the Division of Health of the State of Missouri, which controls the Federal Government grant of funds provided for by Public Law 725.

This gave Lincoln County a hospital with a fifty bed capacity, with all modern conveniences, such as lobby, administration offices, dietary department, two high pressure steam boilers fueled by oil, water softeners, air conditioners, storeroom and laundry facilities. With the scientific services, such as clinical laboratory, x-ray, operating room, central supply, obstetric department, nursery, contagious facilities, four private rooms, thirty-four semi-private beds and twelve ward beds, the hospital is provided with adequate facilities to serve their patients in the most up-to-date hospital procedure.



Lincoln County Memorial Hospital

Corporal
Rodolfo P. Hernandez, U.S. Army
Medal of Honor



0200 HOURS! Suddenly the pre-dawn blackness on Hill 420 split into crashing geysers of flame. Yelling, firing, hurling grenades, a horde of Reds pushed up the hill toward G Company.

A hot fire fight began, lasting several hours. Finally, suffering heavy casualties, G Company began to withdraw. Corporal Hernandez stayed, throwing grenades and firing his remaining rounds.

Then his M-1 jammed. Fixing his bayonet, he leaped out of his foxhole and disappeared in the darkness toward the attacking Reds. They found him in the morning, wounded, ringed with enemy dead. But he had stopped the attack—*alone.*

"A man couldn't fight at all," says Corporal Hernandez, "if he weren't fighting for good things—peace, and a job, and a chance in the world. That's why I'm thankful to the people who've put so many billions into Defense Bonds. For I believe Bonds are a stockpile of prosperity for our country. A guarantee to men like me that we can come home to a secure future."

Peace is for the strong!
For peace and prosperity save with
U. S. Defense Bonds!

Now E Bonds pay 3%! Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semiannually when held to maturity. Also, all *maturing* E Bonds automatically *go on* earning—at the new rate—for 10 *more* years. Today, start investing in U.S. Series E Defense Bonds through the Payroll Savings Plan; you can sign up to save as little as $2.00 a payday if you wish.

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Antibiotics

Charles C. Dennie, M.D.

The reactions to all the antibiotics follow certain patterns and, in many instances, imitate diseases. This leads one to believe that the eruptions produced by the antibiotics or other manifestations are but replicas of the disease once suffered by that individual. Our immunologic reactions are all built upon the fact that when specific antigens are injected intradermally in patients who have had certain diseases, the reaction is nearly always positive and definite for the disease suffered. Upon this law the specificity of skin reactions is built.

Some twenty years ago Milian advanced his theory of biotropism. He was led to this belief by the fact that when he administered certain drugs, especially neoarsphenamine, to syphilitic individuals, old diseases would be stirred up again. Abscesses that had been healed for twenty years reformed but were sterile and rapidly healed again. Scarlatiniform, vacciniform and morbilliform eruptions were produced by the administration of antisyphilitic drugs. In nearly every instance the patient had suffered previously from diseases that had been accompanied by the same type of eruption.

One accepts but with little argument the statement that all infectious diseases leave their mark in some part of the human body, either as floating toxins, antibodies or antigens of different kinds deposited in the reticulo-endothelial system. The shock organs are the ones most frequently involved in antibiotic reactions. If an individual suffered from scarlet fever, for example, there is no doubt that many microscopic particles of this disease would be left in the body, perhaps as long as the individual lived. Since scarlet fever is primarily a disease of the epiderm it is natural that these fixed toxins would be present in the reticulo-endothelial system. The same would be true of other infectious diseases, wherever they may occur, and even of virus and spirochetal diseases, although long since departed from the human body. If the original disease belongs in the category that is eliminated by the antibiotics, it is reasonable to assume that this antibiotic, used at any subsequent time, would be capable of uniting with the antigens, taking them from the fixed cells and reproduce the disease in imitation. Since a great many of the antibiotics are derived from fungi of different types, they contain substances common to nearly all of the fungus group that attacks man, therefore when these antibiotics are used on the patient who formerly suffered from a fungus disease the imitation fungus manifestation would make appearance soon after the antibiotic is used. For example, the vesicular eruptions of the hands and feet quite often follow the administration of penicillin and sometimes the antibiotic is discontinued because of this phenomenon. The drug should not be discontinued because practically all of the antigenic substances left by the fungus infections of the feet and hands are used up in a short time, which is demonstrated by the fact that these lesions dry up in a few days of simple treatment. A continued administration of the penicillin does not cause any further accentuation of symptoms. Similar antibiotic reactions occur in the groins and under the arms.

Urticaria and its corollary, macular eruptions, are the most common ones to follow the administration of penicillin. One cannot always account for the appearance of these eruptions but since many of them have had urticaria previously due to focal infections in the body or fungus infections of the intestional tract, it is reasonable to suppose that these reactors are simply the sequelae and imitators of the original eruption.

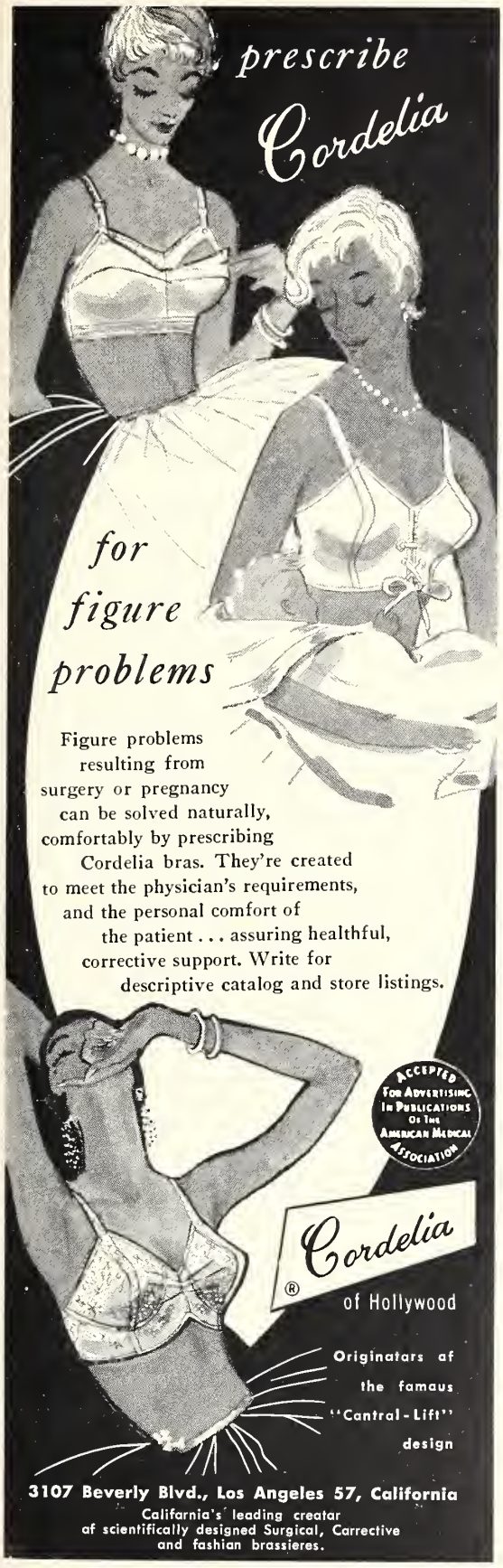
In nearly every instance of the scarlatiniform eruption, which is the most violent and dangerous of all penicillin reactions, the patient has suffered from a severe case of scarlet fever at some time during his life. This is one of the few reactions that are sometimes followed by death. In a limited time after the administration of penicillin the patient develops a sore throat, fever, red edematous skin, has a rise in his white blood count and usually has a moderate rise in temperature. When he recovers from it he desquamates with almost the same intensity as if he had the real scarlet fever. The theory is that the antigens or toxins of the scarlet fever were retained in the reticulo-endothelial system and that the antibiotics release them to produce the pseudo disease. In severe cases the patient should be given fresh blood transfusions, from one to three, which usually control the disease in a short time.

The antibiotics contain certain substances common to a great many fungi that attack the human body. This is especially true of their relation with Candida albicans or Monilia infections.* One patient who had a Monilia infection of the mouth of severe nature finally recovered from it entirely. He had a crack in his lip and applied Aureomycin ointment. Within four hours the patient had a severe return of all the clinical manifestation of moniliasis but these symptoms disappeared in about seventy-two hours. It is well known that practically all of the antibiotic troches will occasionally produce the black hairy tongue which I believe to be an accentuation of a former fungus disease. Another patient who had taken Aureomycin by mouth and had developed a severe diarrhea with ulceration of the edge of the anus suffered a reaction when Aureomycin ointment was applied. Cultures from around the anus showed a heavy growth of Candida albicans.

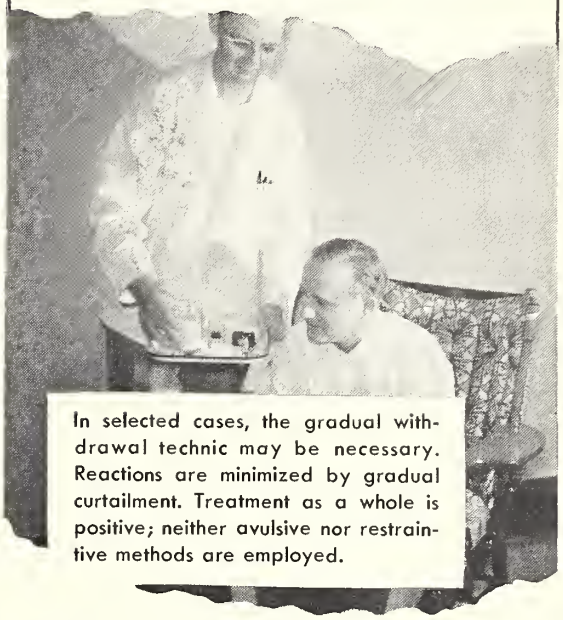
In patients affected with seborrheic dermatitis and Monilia infections of the skin we have noted a great increase in manifestations when the patient is attacked with enteritis from the administration of the antibiotics other than penicillin. It seems that penicillin taken by mouth produces none of these conditions excepting the hairy tongue.

In the treatment of syphilis, especially of arrested cases of tabes dorsalis, it is common observation that shooting pains and even gastric crises have made their appearance after years of silence following the injection of penicillin. One patient who had had a gallbladder crisis twenty-eight years previously, which was thought to be due to syphilis, since her spinal fluid was positive and the crisis disappeared only

* Candida albicans recovered in pure cultures from the mouth.



Doctor..
You Have Patients with ALCOHOLISM



In selected cases, the gradual withdrawal technic may be necessary. Reactions are minimized by gradual curtailment. Treatment as a whole is positive; neither avulsive nor restraintive methods are employed.

We can help you in caring for this type of patient—often described as the "Problem Drinker."

At The Keeley Institute we have the facilities and the specialized experience for outlining and carrying through a comprehensive, coordinated plan of therapy.

From the initial physical and laboratory investigations until the final evaluation prior to discharge, every step in the management of the patient is under the supervised control of full-time physicians.

As the referring physician, you are kept advised of the patient's progress. On dismissal the patient is referred back to you together with a complete report of pertinent findings.

Member, American Hospital Association
Member, Illinois Hospital Association
The Keeley Institute is accredited by the Council on Medical Education and Hospitals of the A.M.A.

Complete information, including rates, will be furnished to physicians on request.

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS

after antisyphilitic treatment, promptly developed the gallbladder crisis upon the administration of a single dose of penicillin. In such instances it is perfectly within the bounds of reason to assume that the toxins or antigenic remnants of the spirochaetae pallidae and the results of their activities remained near the nerve centers originally affected by syphilis and were stirred up by the administration of penicillin. A penicillin reaction anaphylactic in nature sometimes occurs after many doses of antibiotics have been given with no previous reactions. They are of the same character as those following the administration of the specific antitoxins, such as that of diphtheria and similar to the reactions following the administration of fungus extracts. No doubt the specific antigens of the antibiotics build up reactions to themselves until the critical point of reactions is reached and the patient is suddenly thrown into shock.

In closing I wish to leave with you the idea that the antibiotics, when they produce reactions, merely bring to temporary life the ghosts of former diseases and for that reason nearly all reactions are patterned after those diseases.

Dr. Frank H. Lahey—An Appreciation

A dynamic personality has passed from the stage of American surgery. A great individual has succumbed to the ravages of time. No more will his voice be heard in the counsel of surgical progress and no more will his aggressive mind contribute new and constructive thought to surgical achievement. His counsel and advice will be greatly missed.

He stood in the field of surgery like a giant oak in the forest of surgical advancement. Great men in life are like the tremendous trees that stand out and tower above all others. One often wonders what contributes to the development of such oaks that stand above those around them. They all draw their sustenance from the same type of soil, receive the same amount of rainfall and the same degree of sunshine, but here and there is one which stands above all those in the surrounding forest. There can be but one answer. It is not related to the soil, the rainfall, the sunshine or the environment but the unknown quality of the acorn itself. Something existed in the germ seed that regardless of environment it was destined to become an oak that by its size, height and gigantic proportions attracted at once the attention of all who passed its way.

This well exemplifies the outstanding stature of Dr. Frank Lahey. He stood as a giant in the field of surgery and all who passed his way stopped to admire and revere. There was something within him that could not and would not be deterred. The talents that were inherent within him were destined to full culmination. These were many and were stimulated to full maturity by an indomitable zeal and by persistent application. Few have possessed so many qualities for attainment and few have developed them to such a degree of perfection. They have been progressively developed to a point where each stood out as a monument to his great mental capacity.

As a surgeon with an almost endless list of contributions to surgical progress, his influence has been great for many years. Few there are who have contributed so much to surgical advancement and stimulated so many in surgical thought. His mind constantly was seeking new approaches to surgical problems and new conceptions of the effect of disease.

As a teacher and lecturer he could not be excelled. He contributed enormously to the advancement of surgery through the medium of the scientific platform. His talents were always in demand and the attendance was related only to the capacity of the assembly hall.

His talent as an organizer and evaluator of able cooperative personnel is well attested by the renowned Clinic which he established. The steady expansion of this facility and the extent to which it had become a center for postgraduate education is a monument to his organization, executive and scientific ability.

He kept his lights trimmed and burning and never hid his talents under a bushel. They shone more brightly as the years came and went.

At the recent meeting of the American Goiter Association he conducted a never-to-be-forgotten panel upon "Thyroid Disease."

It was my pleasure, as President, to present to him the Meritorious Award of the Association for distinguished service in the field of thyroid disease. In acknowledging this recognition he made one of the most powerful addresses of a long career, emphasizing principally the necessity for professional unity and cooperative relationship. This was recorded and will appear in the proceedings of the Association. It will be well worth reading.

It is difficult to realize that Dr. Lahey is no longer with us. I personally, feel his passing very deeply. To me, he has been a friend of long standing, a wise counselor and a great stimulating influence. He has fulfilled the ultimate purpose of life. He has left the world better by having lived in it. He stood for high attainments, for professional unity and for scientific advancement. He was weighed in the balance and was not found wanting.—Claude J. Hunt, M.D., Kansas City.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

ome questions about filter cigarettes
hat may have occurred to you, Doctor

and their answers by the makers of Kent

Q: What materials are used in cigarette filters?

A: Until just recently, cellulose, cotton or crepe paper were the only materials used in cigarette filters.

Now, after long search and countless experiments, KENT's "Micronite"* Filter has been developed. It employs the same filtering material used in atomic energy plants to purify the air of minute radio-active particles.

Q: How effective are these cigarette filters?

A: Scientific measurements have proved that cellulose, cotton or crepe paper filters do not take out a really effective amount of nicotine and tars.

However, these same tests also have proved that KENT's exclusive Micronite Filter *approaches 7 times the efficiency of other filters in the removal of tars and nicotine* and is virtually twice as effective as the next most efficient cigarette filter.

Q: Do physiological reactions to filter cigarettes differ?

A: The drop in skin temperature occurring at the finger tip induced by filtered cigarette smoke was measured according to well-established procedures. (a, b)

For conventional filter cigarettes, the drop was over 6 degrees. For KENT's Micronite Filter, there was no appreciable drop.

Q: Does an effective cigarette filter also remove the flavor?

A: KENT's Micronite Filter . . . the first cigarette filter that really works . . . lets smokers enjoy the full pleasure of a really fine cigarette, yet gives them the greatest protection ever from tars and nicotine.

In less than a year's time, the new KENT has become so popular it outsells brands that have been on the market for years.

• • •

References Cited

a. *J.A.M.A.*, Vol. 103, 1934, p. 318
b. *J.A.M.A.*, Vol. 135, 1947, p. 417

takes out up to 7 times more nicotine and tars—leaves in full, rich tobacco flavor.

Letters to Missouri Medicine

Steelville

To the Editor:

About five years ago Steelville had one M.D. and one D.O. to serve half of Crawford County with its 5,000 inhabitants. The M.D. was 80 years old and could not do much. Most of our women expecting to be confined soon, had to travel about a hundred miles to be delivered in a St. Louis hospital. Most accident cases were treated by the osteopath. The deathrate of the inhabitants in 1948 was high—residents 13.3, state 10.8. Deaths of the newborn (stillbirths and neonatal) were high—residents 78. It should be about 30.

Then Dr. A. arrived, a graduate of St. Louis University, with a two year internship at St. Anthony's Hospital. For a few months he rented Dr. Parker's office and during this time he bought a lot and had a satisfactory office building constructed. This building provided, besides a large waiting room, five other rooms: consulting room, roentgen apparatus, laboratory and lavatory, operating room and one bedroom. He employed a practical nurse to assist in operations and watch the parturient woman. The arrangement seemed ideal for a country doctor.

He soon acquired a splendid reputation both as a surgeon and physician. Major surgery was of course only performed in a hospital—the Rolla Hospital about thirty miles away.

So many babies were born in his obstetric room! When he received a message that the pregnant mother had labor pains, he told the father to bring her to his office. His nurse watched her while he was waiting on other patients in another section of the building. Anesthetics were administered as seemed necessary. After parturition the mother remained in the room several hours. Then the father and nurse carried her to their car and they took her home. Food for the mother was obtained from a nearby restaurant.

Dr. A. not only planned his office building but also utilized his roentgen apparatus when indicated. The practice was a success even from the financial standpoint.

Then came the shock!

Our practitioner wanted to take up surgery as a specialty. It was rumored that his wife was not contented as there was no immediate prospect of giving their children a religious education.

A local committee bought the office building and equipment, but refused the application of another young doctor because he was unmarried, reared in a mining district, unacquainted with the Ozarks and his religious training was foreign to the majority of citizens. He was well trained and seemed to be willing to work hard, but it was doubtful that he would become permanently amalgamated with our society.

A third applicant (Dr. C.) was accepted for there were no social nor religious obstacles. The wife was gladly received by our social leaders, and we believed he would become a permanent adherent to rural practice.

Now Crawford County has two young M.D.s and three D.O.s and a hospital thirty miles distant. Probably, some expectant mothers will continue to go to St. Louis to have their babies. We can get along and the statistical evidence in the next few years may show that our death rate from cardiac diseases and pneumonia has declined and no maternal deaths have occurred. Will our high mortality of the newborn also decline?

Dr. C. pays $150 a month rent and this sum is credited to the cost of the building, no interest is charged by the contributors. A contract was drawn up stating that after five or six years he may pay the balance due on the cost of the building, and the owners will give him a quit-claim deed. Actually, if he makes a success and his family is content, he will own his office building, and the contributors will receive the original purchase price.

Dr. John Doubeck (Dr. A. above) was kind enough to furnish me a comprehensive account of his medical service during his residence in Steelville, a little more than two years. During this time he waited on nearly 10,000 patients, or an annual average of 4,800. In fact, he possesses about 2,500 medical records. (I know he could write an instructive paper for the rural doctor). Income? I did not ask him; figure it out yourself.

An analysis of his obstetric service reveals that he waited on sixty-three women with no maternal deaths; curiously, the births took place in three places; in the hospital, in his office and in the home—twenty-one in each—no maternal deaths; forty-eight were multiparae and fifteen primiparae.

He was unfortunate with his newborn infants, four deaths in this series; hydrocephalus, congenital deformity and two with respiratory insufficiency. All died in the hospital, none in the home or office. Some obstetric complications caused some anxiety: a placenta praevia necessitating a Cesarian section, a transverse presentation, a cervical tear causing a dangerous hemorrhage and a severe eclampsia.

As suspected, geriatrics was a large part of his professional activity, 27 per cent. This exceeded even pediatrics, 24 per cent. Services for emergencies were figured at 6.5 per cent, about the same as surgery. Fractures, major and minor surgery were about equal in the statistics. Obstetrics numbered only 2.4 per cent. (The osteopath at Steelville has acquired a great reputation as a skillful obstetrician.)

Good medical service! The young physician demonstrated what a success can be achieved when he has a large well equipped office and a practical nurse to assist even though it is hard work even for a young man.

John Zahorsky, M.D.

Your Patients Read

Science Closes in on Cancer...*Everybody's Digest*...July.

How Is Your Allergy Today?...*Better Homes & Gardens*...July.

Your Nerves and Your Stomach...*Coronet*...July.

How to Choose Your Doctor...*Pageant*...July.

Asthma...*Good Housekeeping*...July.

Why You Eat What You Eat...*McCall's*...July.

Hysterectomy: Medical Necessity or Surgical Racket?...*Reader's Digest*...August.

In Vegetable Gum Sensitivity

When patients are sensitive to vegetable gums (karaya, tragacanth, etc.) you can safely suggest AR-EX Wave Set. Uses quince seed extract as the mucilaginous agent. Does not dry powder or flake off hair. Available either Scented or Unscented.

In 6 oz. bottles at pharmacies

AR-EX WAVE SET

AR-EX COSMETICS, INC. 1036 W. VAN BUREN ST., CHICAGO 7, ILL.

AR-EX
HYPO-ALLERGENIC
Cosmetics
CLINICALLY TESTED
FOR ALLERGIC PATIENTS

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.

Ethical Pharmaceuticals

1929-31 O'Connell Ave. St. Louis 14, Mo.

For

BETTER
Birth
Control

Since 1934

No Finer Name in Contraceptives...

A product of
WHITTAKER LABORATORIES, Inc.
PEEKSKILL, N.Y.

Active Ingredients
Trioxymethylene 0.04%
Sodium Oleate 0.67%

Low Forceps

Robert Lamar, M.D.

We were called a few days ago by a urologist who wished to discuss the electrolyte balance of a mutual patient. While matching his conversation milliequivalent for milliequivalent (thus bolstering both our egos and doing the patient no real harm), the thought occurred that here, in urology, the patina of modern medicine shines more flagrantly than anywhere else. The new found ability to master The Gadget, the cystoscope with its many mirrored gimmicks and attachments, has gudged the urologist into the respectable society of his Hippocratic brethren. The permanganate jug and the trough have given way to chrome and asepsis, and the screams accompanying sounds in the night are replaced by polite murmurs of whispered confidences. Coat and tie and manicured nails have even become appropriate to this new type healer of ancient plagues. Granted these changes are superficial—the lascivious nudge, the concupiscent leer, the utterly filthy anecdote still remaining a fundamental part of the urologist's personality—we still feel that a few short years have wrought great things. How remarkable that our mechanistic technology can altogether alter and, in fact, recreate the practice of urology.

Fellowships in Arthritis Research Offered

Concentration on seeking the cause and cure for arthritis and rheumatism in a stepped up program of basic research for 1954 by the Arthritis and Rheumatism Foundation has been announced to D. Elliott O'Reilly, M.D., St. Louis, a director of the Eastern Missouri Chapter of the Arthritis and Rheumatism Foundation, and chairman of its medical and scientific committee. The announcement was made by General George C. Kenney, Foundation president.

The expansion of the Foundation's research program is coupled with an invitation to students in Missouri medical schools to become research workers in arthritis. Robert A. Moore, M.D., Dean of Washington University School of Medicine, and James W. Colbert, Jr., M.D., Dean of St. Louis University School of Medicine, are both members of the Foundation's local chapter medical advisory staff.

Emphasis of the basic research is being placed upon fundamental studies related to arthritis, among which are studies of the structure, chemical composition and function of the connective tissues of the joints since it is in these tissues which bind together and support the joints that the key to the cause of arthritis is believed to exist. It is estimated that in metropolitan St. Louis there are approximately 122,000 people who suffer from the disease.

Fellowships being offered for 1954 are open to interns, resident physicians, student researchers, graduate researchers and established research scientists. The fellowships run from predoctoral range of $1,500 to $3,000 a year up to those for experienced investigators of $6,000 to $7,500 a year. Applications for fellowships should be made before November 1 to Eastern Missouri Chapter, Arthritis and Rheumatism Foundation, 220 N. Fourth Street, St. Louis.

Of This and That

Mark M. Marks, M.D.

On a recent journey to a distant city with a little time to spare, I stepped into a theatre and so was introduced to stereopticon movies. The first part of the program was of ordinary variety consisting of news, views and telling of coming attractions. Then came a breath-taking, delightful experience. We were asked to put on the polaroid glasses that were handed to us at the door.

As if by magic, we were transported to what seemed to be interstellar space. To the sound of weird music, objects like cosmic dust floated silently from the screen and passed. The mood of the strange tune changed and the seemingly endless whirl of circling planets turned to spirochetal masses wiggling in agonized frenzy. With the ethereal unreality of a nightmare, nearly palpable objects came spinning tantalizingly close but just out of reach.

With a change in the music, came a change in scenes. Dancers began to tell a classical story of faith and love. As in a dream they appeared nearly real. One could almost feel their breath and warmth. With other musical variations we sat dazed while languid fish played about us, seals jumped from rocky ledges and splashed us with water. Animals in a zoo seemed to walk about us without concern. Forests, rivers and villages appeared with such reality as to space and color that I found it difficult to remember that all this all this was only an illusion captured on film and seen through the wonder of bent light.

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED: Locum Tenens for 2 years beginning July 15th or August 1st, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

WANTED: Internist: 650-bed, fully accredited State Tuberculosis hospital with complete, modern facilities, located in Midwest, near city of 80,000 population has immediate opening for internist, eligible or Diplomate American Board. Salary $12,000 per annum. Box 188, Mo. State Med. Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

WANTED: Ob.-Gyn. Board eligible graduate of top school to be associated with long established, 8 man group in Central Missouri. 80 bed hospital. Salary open. Partnership early. Reply stating full particulars, first letter, Box 200, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: Young graduate, top medical school. Interested general practice but with sufficient experience to do obstetrics while obstetrician is in service. 8 man group, Central Missouri. Salary open. Partnership after two years. 80 bed hospital. Reply full particulars, Box 201, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: A Board eligible or certified internist from one of best medical schools, fill vacancy in 8 man group in Central Missouri town of 7,000. 80 bed hospital. Practice from territory with 75 mile radius. Salary open. Partnership after two years. Reply stating full particulars re self, first letter, to Box 202, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED—General Practitioner, draft replacement. Pleasant county seat of 1500 in Atchison County, Missouri. Active practice. New hospital 15 miles away. Contact Wallace Carpenter, M.D., Rockport, Mo.

GENERAL PRACTITIONER, young locum tenens for busy general practice. Town 3500, new hospital. Partner entering service. Good chance permanent association when partner returns. Salary open. Write Robert W. Smith, M.D., Marceline, Mo.

IDEAL LOCATION FOR DOCTOR OR DENTIST. Nearest doctor is one and one-half miles away, location in heart of business section, yet adjacent to residential district. Suitable for combination home and office. 1214 North and South Road, University City, Mo. 5 rooms; tile kitchen and bath; garage; basement. Real Estate Management Co., 317 S. 11th Street, St. Louis, Mo. MAin-0952.

WANTED: Staff Physicians: 650-bed, fully accredited State Tuberculosis Hospital, located in Midwest near city of 80,000 population has immediate opening for staff physicians who are graduates of American Medical Schools, who have finished an approved internship or who have finished an approved internship and have had one or more years of experience in tuberculosis or chest diseases: Physician I Tuberculosis—starting salary $6,000 per annum to $9,000 per annum in $500 steps (annually); Physician II Tuberculosis—starting salary $7,000 per annum to $10,000 per annum in $500 steps (annually). Box 189, Mo. State Medical Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

PHYSICIAN WANTED. Unopposed general practice in farming community 1½ hours from St. Louis. Good office and equipment including X-Ray and Cardiograph. 15 minutes from good hospital. Leaving for service when replacement is found. Write John H. Hooker, M.D., Clarksville, Mo.

Hair Permanently Removed by Electrolysis
DOROTHY WORRELL, R.N.
233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436
Work Done on Prescription of Physicians Only

RADIUM & RADIUM D+E
(including Radium Applicators)
For All Medical Purposes
Est. 1919
Quincy X-Ray & Radium Laboratories
(Owned and Directed by a Physician-Radiologist)
HAROLD SWANBERG, B.S., M.D., Director
W. C. U. Bldg., Quincy, Illinois

INDEX TO ADVERTISERS

Abbott Laboratories 714-715
American Meat Institute 665
Ames Company 660
Ar-Ex Cosmetics 725
Ayerst, McKenna & Harrison, Ltd. 705

Baker Laboratories 673
Bayer Company 700
Brown Schools 729
Blue Cross-Blue Shield 711

Canada Dry Ginger Ale, Inc. 728
Ciba Pharmaceutical Products 667, 717
Coca-Cola Company 661
Cook County Graduate School 729
Cordelia of Hollywood 721

Paul B. Elder Co. 728

Fairmount Hospital 727

Hamilton-Schmidt Company 725

W. E. Isle Company 727

Kansas City Southwest Clinical Society 694
Katz Drug Company 732
Keeley Institute 721
Kent Cigarettes 723

Lederle Laboratories ..... Insert
Eli Lilly and Company 674
Luzier's, Inc. 690

Mead Johnson & Company 736
Medical Protective Co. 729
Merck & Company 731
Milwaukee Sanitarium 699

Neurological Hospital 727
Norbury Sanatorium Co. 727
North Shore Health Resort 730

O'Connell Bros., Inc. 725

Parke, Davis & Company 658-659
Chas. Pfizer & Company, Inc. 671
Physicians Casualty Association 730

Quincy X-Ray & Radium Laboratories 733

Sanborn Company 729
Schering Corporation 663
G. D. Searle & Co. 689

U. S. Brewers Foundation, Inc. 727
United States Savings Bonds 719
University of Kansas Medical Center 734
Upjohn Company 735

West Texas Maternity Hospital 725
Whittaker Laboratories, Inc. 725
Winthrop-Stearns, Inc. 669
Dorothy Worrell 733

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in The Journal is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by The Journal when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

POSTGRADUATE COURSES

in

ORTHOPEDICS, PHYSICAL MEDICINE and REHABILITATION
October 26 to 28, 1953

Guest Instructors:
ALEXANDER P. AITKEN, M.D., Tufts College.
WALTER P. BLOUNT, M.D., Milwaukee, Wisc.
MILAND E. KNAPP, M.D., University of Minnesota.
JESSE T. NICHOLSON, M.D., University of Pennsylvania Graduate School.
WILLIAM D. PAUL, M.D., State University of Iowa.

GYNECOLOGY
November 9 to 11, 1953

Guest Instructors:
WILLIS E. BROWN, M.D., University of Arkansas.
WILLARD R. COOKE, M.D., University of Texas (Galveston).
ROBERT A. ROSS, M.D., University of North Carolina.
FRANK R. SMITH, M.D., Cornell University.
HOWARD C. TAYLOR, JR., M.D., Columbia University.
WALTER L. THOMAS, M.D., Duke University.

For program announcement and information, write:

Extension Program in Medicine
UNIVERSITY OF KANSAS SCHOOL OF MEDICINE
Kansas City 12, Kansas

Curiosa et Trivia

William B. McCunniff, M.D.

Military amputations in four years of World War II total less than those done on civilians in one year now.

Another check-payer: pronounce "posterior"—but before collecting, note that the first three letters rhyme with "hos . . .," as in "hospital."

Watchdog and controller of new, "magic," and scarce drugs, the National Research Council, obviously geared to the pace of modern medicine, was founded in 1865 by President Abraham Lincoln.

And there are still insomniacs? Approximately 8,000,000 sleeping potions are sold in the U. S. every day. Experts state that indiscriminate use of barbiturates presents a greater problem now than that of morphine.

Annual revenue of about $3 million for med-dent-nursing school is collected by West Virginia from a tax on soft drinks referred to as the "Pop Tax."

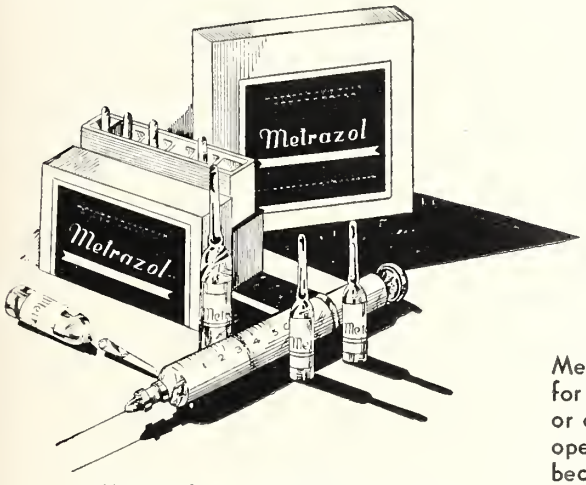
Reference (with accent) to patients from Nineteenth Century Barming Insane Asylum in England, gave us our word "balmy."

1842: Undemocratic prigs in Virginia were taxed $30 per year for the privilege of owning a bathtub.

The pancreatic tissue from 7,500 hogs is processed into one ounce of crystalline insulin.

Dartmoor prison convict breaking his dentures in an attempted escape, had them replaced free under Britain's health plan, although not without protest.

Masterpiece of understatement by Professor Alexander Fleming: "Penicillin is an effective antiseptic."



Metrazol, pentamethylentetrazol
Ampules, 1 cc. and 3 cc.
Sterile Solution, 30 cc. vials
Tablets and Powder

Metrazol

COUNCIL ACCEPTED

A DEPENDABLE, QUICK-ACTING CEREBRAL AND MEDULLARY STIMULANT

Metrazol is indicated for narcotic depression, for instance, in poisoning with barbiturates or opiates, in acute alcoholism and during the operation and postoperatively when respiration becomes inadequate because of medullary depression due to the anesthetic.

Inject 3 cc. Metrazol intravenously, repeat if necessary, and continue with 1 or 2 cc. intramuscularly as required.

Bilhuber-Knoll Corp. Orange, N. J.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

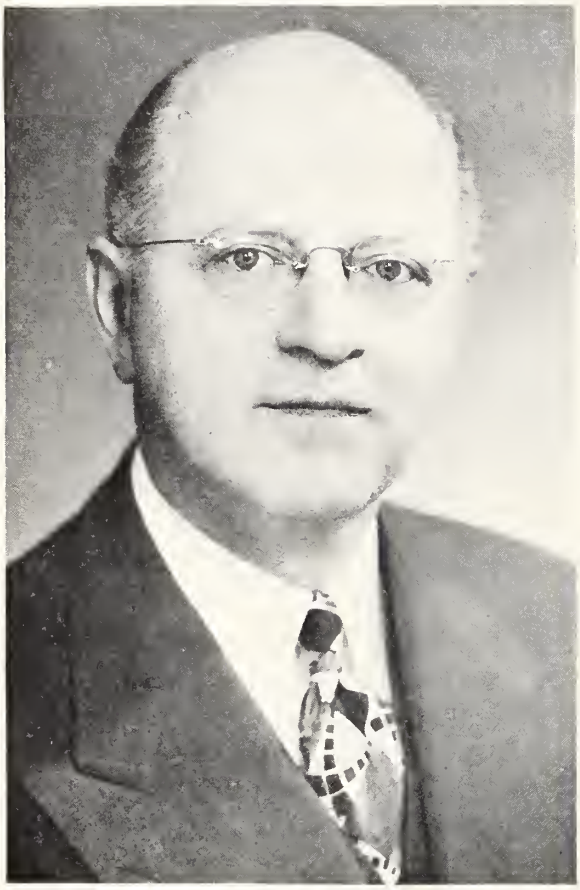
Guest Editorial

Physicians, Help Us!

Ned H. Dearborn, *President, National Safety Council*

Disease prevention long has been the goal of medical men. They have given unceasing support to health education. Their researchers have spent weary years in pursuit of elusive vaccines.

Accident prevention has not been equally blessed by the attention of the medical profession, yet accidents have become one of the major health problems—in some respects, the greatest one.



Ned H. Dearborn, President, National Safety Council.

Accidental deaths are exceeded in number only by those from diseases of the heart, cancer and cerebrovascular conditions.

They are the greatest killers at all ages from 1 to 35 years—the most active years of life.

And because of their preference for the young and the active, accidents cause more loss of potential working life than any other principal cause of death, and loss of more potential years of life than any other cause except heart disease.

The importance of accidents as a health problem is in part the result of medical efficiency, because accidents have risen in the hierarchy of public enemies not through a rising accident rate, but rather through lowering rates for infectious diseases.

For a long time the interrelation of safety and health has been an accepted fact by the industrial physician. But the physician in private practice too frequently considers his only responsibility to be the patching up of the accident victim.

What else can the physician do?

First, he can inform himself on the causes and cures of accidents in the same way that he does with disease.

Second, he can accept the fact that accident prevention is a proper concern of his profession and attempt to advise and educate whenever possible.

The eye doctor, for example, not only can tell his patient that he has poor side vision, but he also can explain how to compensate for it when he drives a car.

The pediatrician can be as diligent in advising parents of the accident hazards of babyhood and childhood as he is in prescribing diets and treatment of illness.

Doctors in all fields can detect physical weakness and mental instability which, when presented properly to the patient in relation to its accident potential, may prevent death, disability or painful and costly injury.

Literally, a doctor's stitch in time in the consultation room may save nine in the operating room.

Of This and That

Mark M. Marks, M.D.

Have you noticed the foreign trend in the titles of our popular music? To give you a "fur instance,"—"*Allez Vous On*" and "*C'est Si Bon*"—from the land of the can-can—and "*Vaya Con Dios*" from across the gulch called Rio Grande. A rollicking *gesundheit* song will come up, I betcha'—God bless you, too.

SMALL WONDER

A moppet talking quietly to her doll—a hopeful young fisherman fascinated by the possibilities of his baited hook and the inevitable fall rush to outfit children for school.

cortisone + SCHERING = Cortogen

he symbol SCHERING denotes leadership in
teroid hormone research and
nanufacture -- including Cortogen
in the most useful clinical forms.
For systemic therapy, use Cortogen
Tablets SCHERING or injection.
For eye disorders use Cortogen
phthalmic Suspension --
sterile. The Schering seal SCHERING
ppears on each tablet and package
-- your assurance of quality.

CORTOGEN®

Acetate (cortisone acetate, Schering) Tablets, 5 mg. and 25 mg.;
Injection, 25 mg. per cc., 10 cc. multiple-dose vials;
Ophthalmic Suspension—*Sterile*, 0.5% and 2.5%, 5 cc. dropper bottles.

Schering CORPORATION · BLOOMFIELD, NEW JERSEY
In Canada: Schering Corporation, Ltd., Montreal.

CORTOGEN

SCHERING

With Our G. P.'s

William J. Shaw, M.D.

Hyphenations of county medical societies, rural Missouri medical meetings, physician placement services and the contribution that organized medicine in Missouri could make to undergraduate and postgraduate medical education, were among the pertinent matters discussed by the Committee on Rural Medical Service of the Missouri State Medical Association, August 7, in Jefferson City.

William J. Shaw, M.D.

In a program that would have interested general practitioners throughout Missouri, the Committee heard a discussion of the Missouri Indigent Medical Care Survey by Dr. C. E. Lively, chairman of the Rural Sociology Department of the University of Missouri, and his assistant, Dr. Mark Hale. This survey is presently in its formative stage and is of definite interest to every doctor in the state. It is a strictly fact finding project requiring, before completion, the cooperation of every doctor in the surveyed counties.

Also appearing before the Committee was Chester Starr, Director of Rural Health Services of the Missouri Farm Bureau, who discussed county health units, health councils and relationship of the Farm Bureau to practicing physicians in the utilization of Blue Cross and Blue Shield in both urban and rural communities.

Dr. E. R. Bohrer, Missouri State Medical Association Secretary, and Field Secretary Raymond McIntyre were guests of the Committee. Members are Drs. A. E. Spelman, chairman, Smithville; Joseph C. Creech, Troy; Charles Lewellen, Louisiana; John J. Killion, Portageville; H. W. Carrington, Lebanon; W. A. Broyles, Bethany; C. A. McBurney, Slater; A. J. C. McCallum, Aurora, and W. J. Shaw, Fayette.

This meeting may not have solved all the questions bewildering medicine today, but it may be safely concluded that the members attending returned home better informed on many questions, and willing and eager to share that information with their colleagues.

Crossroads Comment

P. V. Siegel, M.D.

Dear Uncle Ted:

Seems like old Father Time has speeded up a knot or so. Been no time ago we were wishing for spring and warm dry weather. Now we are wishin' for rain and cooler. Fact is most of us are doing more than wish for rain. I even paid the preacher a little more but that ain't helped none yet.

Round our household it has been pouring in other ways. People who were going to pay up when they sold the wheat crop are using it to buy feed instead. I didn't have any wheat but still have to buy hay since the grass fizzled out. Kids all had a round of sore throat and one cut her leg. Thermostat on the refrigerator pooped out and the beer got warm. (I should have called the dealer out at one A.M. like he does me.) Washing machine blew up. Basement drain got plugged. Car battery went dead. Only one event went off without a hitch. The dog had four pups. Wish all my OB's had babies as easy and took care of them as well. Incidentally anyone in the market for a registered Dachsy pup can contact the Missus here at the Crossroads. (Nothing like a little free advertising.) Outside these all's fine round these parts.

It's all in the way one looks at things and as a rule no two see them alike. For instance, among my mail while back was a right purty little book. Must have cost right smart of money to print. Tax money too!! Was College of Agriculture Bulletin No. 594 asking "What Has Happened to the Country Doctor" and using up fourteen pages trying to answer. I could have done it in four words but nobody asked me. Who the hell cares? In it I also read what an unhealthy lot we farm people are and how we do without most of the medical care we need because it ain't available and it costs too much.

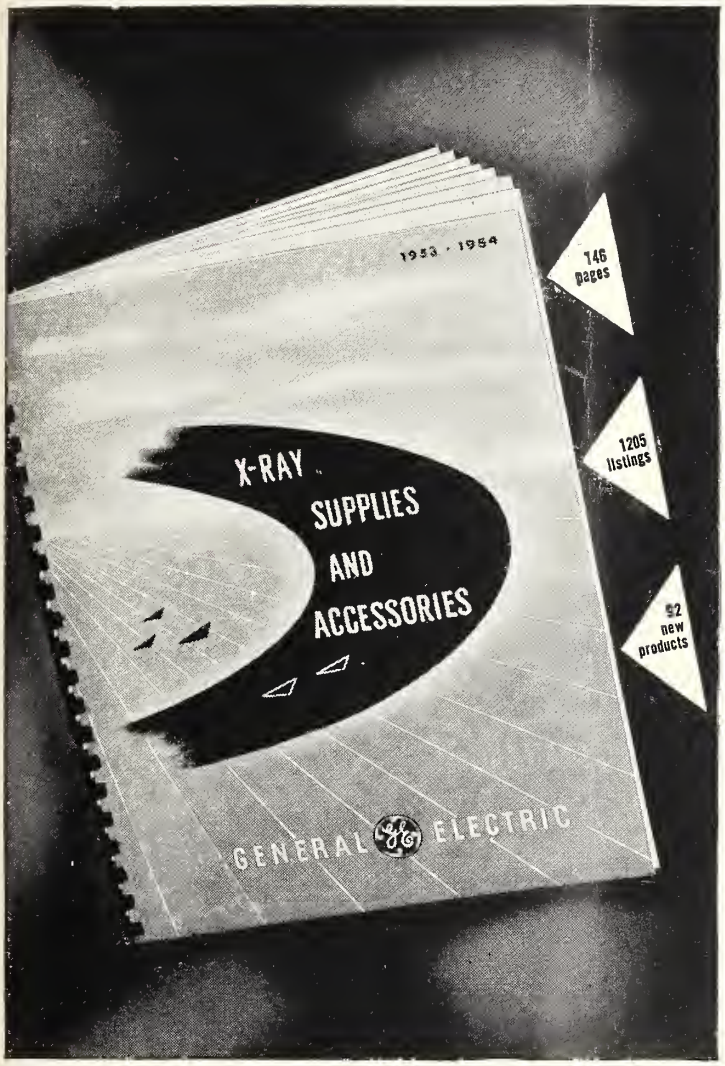
I would like to show the Gent what wrote it around my neck of the woods and I am sure others like Buddy Glenn, Frank Matteson and the Kellings would like to do the same. People just don't want horse and buggy doctors any more than they want horses and buggies.

For what it's worth I recommend all G.P.'s read what Dr. E. P. Lehman had to say about them at the Texas Surgical Society meeting in 1952. It's published in the Jan. '53 issue of *Surgery*. I have a few comments but somehow haven't been able to cool them down enough to get them printable. Then too Grandpap warned me many times to "never get in a urinating contest with a skunk."

I feel a whitteling mood coming on so 'till next month I remain

Your devoted nephew,
Pete

Here's the *most comprehensive* x-ray supply catalog ever published!



No x-ray department can afford to be without General Electric's new x-ray supply catalog. Every supply and accessory item you need is covered in an easy, straight-forward manner that simplifies ordering.

And here are two unique conveniences: Prices are printed alongside every listing — there's no need to bother with a separate price list. Bound-in postpaid order cards also save time — and postage.

Ask your G-E x-ray representative for this handy reference guide to your entire x-ray supply needs.

GENERAL ELECTRIC

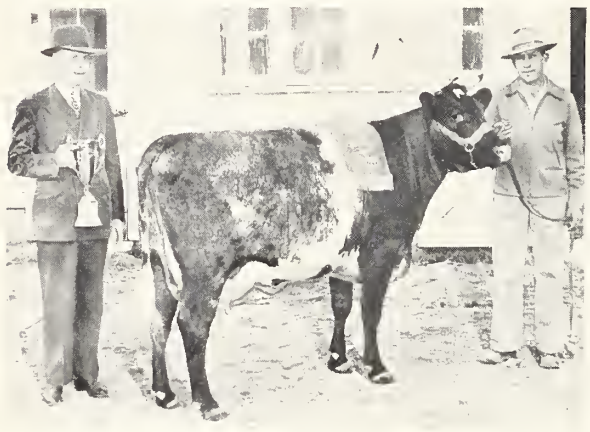
Direct Factory Branches:
KANSAS CITY — 112 West 19th Street ST. LOUIS — 2010 Olive Street

What Is Your Hobby, Doctor?

". . . born in the bone, stays in the flesh"

The story of J. L. Johnston, M.D., Springfield, and his interest in cattle raising, is simple. Like many physicians, he was born and reared in the country and always was interested in live stock of any kind, particularly cattle.

On his three farms, west of Springfield, known as the Lilydale Farms, he has a herd of two hun-



dred head of registered Milking Shorthorn heifers and cows. He has built this herd from a small start of fifteen registered cows in 1931, up to its present impressive proportions.

To Dr. Johnston, this is not only a hobby, but he considers it as big business. Some of his production figures are impressive. For instance, his farms sell over 350,000 pounds of grade A milk in the Springfield market each year. He specializes in the milking shorthorns because they are dual purpose cattle, used both for beef and milk production.

Inasmuch as England is the native home of the breed, he has had considerable correspondence with English farmers, and imported two bulls from England in 1951. Dr. Johnston reports that 75 per cent of the cattle in England are Milking Shorthorns.

He exhibits his prize winners on the show circuit every summer. He always enters at the Ozark Empire Fair, Missouri State Fair, American Royal, Dairy Cattle Congress (Waterloo, Iowa) and the International Dairy Show in Chicago. He won championships in the American Royal Dairy Show of Kansas City in 1950, 1951 and 1952; he won the National Grand Championship with his cow in 1948, and again in 1952. At the 1951 show he sold a cow at the National Milking Shorthorn sale for the top price ever paid for a female of this breed in the United States.

In addition to producing milk and beef, Dr. Johnston has sold breeding stock in practically every state in the United States and to South America. Last year two bulls were shipped to South America by airplane.

Besides handling an active practice, Dr. Johnston finds time to act as Director and President of the American Milking Shorthorn Society, with the national office in Springfield.

Dr. Johnston enclosed an accompanying photograph of himself, his partner, Sam Beadleston, and their grand champion cow of 1948. The cup which Dr. Johnston holds is symbolic of quality and undoubtedly has no reference to the quantitative production record of the grand champion.

(If you know of some member with an interesting and unusual hobby, won't you let us know? V. T. W.)

Specialists vs. General Practitioners

. . . "Limitation of practice is no criteria of a specialist. All doctors of necessity are limited. In retrospect it took many years to arrive at Specialty Boards status quo of this date.

"A general practitioner is a legally qualified doctor of medicine who does not limit his practice to a particular field of medicine or surgery. In his general capacity as family physician and medical advisor he may, however, devote particular attention to one or more special fields, recognizing at the same time the need for consulting with qualified specialists when the medical situation exceeds the capacities of his own training or experience."—(Definition accepted by Council on Med. Education, A.M.A., and A.C.S.)

. . . General practice as regulated by the academy, the section in medical societies and hospitals and by various boards and the college of surgery, might well by collaboration come forth with an approach toward G.P. specialization following training and experience with ability as a prerequisite to a general medicine fellowship and/or Board.

. . . The specialist who progresses directly from medical school to his specialty cannot see general practice in the proper perspective. No one but an egoist would say, "Come one, come all. I will treat you."

. . . We know that the G.P. is responsible for a large percentage of medical care. The pendulum of specialization is swinging back to personal service by competent trained and experienced doctors who are distinctly and ideally Family Physicians.

. . . Director Hawley of the A.C.S. has unleashed . . . more phantoms.

. . . This is where harmony should be of paramount importance with constructive collusion rather than castigation on one side and "Am I my brother's keeper?" attitude replaced by "No ghosts in these gowns" on our backs.

. . . Round and round the "Rights and Privileges" wheel spins and where it stops *ne unus quidem sciat.*"
—E. Clarkson Long, M.D., in *Detroit Medical News* "Correspondence," April 6, 1953.

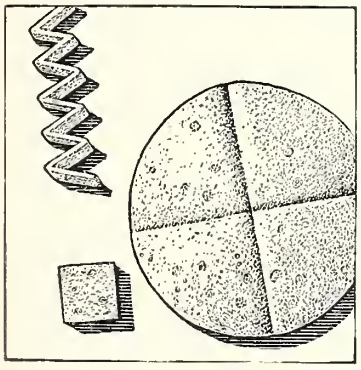
Upjohn

absorbable
hemostat:

Available in a large variety of sizes and forms, including:

Surgical sponges
Compressed surgical sponges
Dental packs
Gynecologic packs
Nasal packs
Prostatectomy cones
Tumor diagnosis kit

The Upjohn Company, Kalamazoo, Michigan



Gelfoam

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Trademark Reg. U.S. Pat. Off. BRAND OF ABSORBABLE GELATIN SPONGE

Our Auxiliary

Mrs. C. Alex (Helen) McBurney, *President*

There are two requests on my desk from auxiliary members.

1. How do we get copies of Missouri Medicine, the magazine published by the Missouri State Medical Association, in order to keep better informed on the activities of the Missouri State Medical Association and its auxiliary?

2. What is the World Medical Association?

Dr. Vincent T. Williams, editor of Missouri Medicine, has offered this suggestion, which we hope will be followed. In order for the auxiliary members to enjoy reading Missouri Medicine, Doctors, please take your copy home.

The World Medical Association is young, the first assembly being held in 1947. It provides an opportunity for an exchange of ideas by delegates from countries throughout the world, with one motive in mind; to provide the best medical care for its people.

The objectives of the World Medical Association are:

1. To promote closer ties among the national medical organizations and among the doctors of the world by personal contact and all other means available.
2. To maintain the honor and protect the interests of the medical profession.
3. To study and report on the professional problems which confront the medical profession in different countries.
4. To organize an exchange of information on matters of interest to the medical profession.
5. To establish relations with and to present the views of the medical profession to World Health Organization, U.N.E.S.C.O. and other appropriate bodies.
6. To assist all peoples of the world to attain the highest possible level of health.
7. To promote world peace.

We should be interested because more and more problems are being decided on an international basis. The dues are $10 a year and the office is in New York City.

Progress Notes of Prepayment Plans

St. Louis Blue Cross-Blue Shield

In 1952 every working day 9,389 persons joined Blue Cross and 14,368 joined Blue Shield.

Nationally 2,375,472 persons became Blue Cross members and 3,635,177 became Blue Shield members during 1952.

According to the 1953 *Spectator,* commercial insurance companies paid out in benefits only 53.6 per cent of their income dollar during 1952. Blue Cross Plans nationally paid out 88.6 per cent of their income dollar in benefits while Blue Shield paid out 79.8 per cent.

More than 44,000,000 Americans budget for unexpected hospital bills the Blue Cross way. More than 23,000,000 Americans are now enrolled in Blue Shield, the medical doctor's Plan for surgical-medical care.

Every day 43,000 persons are admitted as patients to hospitals in the United States—one every two seconds.

There are ninety-seven Blue Cross member hospitals in Missouri rendering service to Blue Cross members.

Each month the St. Louis Blue Cross Plan pays more than 12,000 hospital bills.

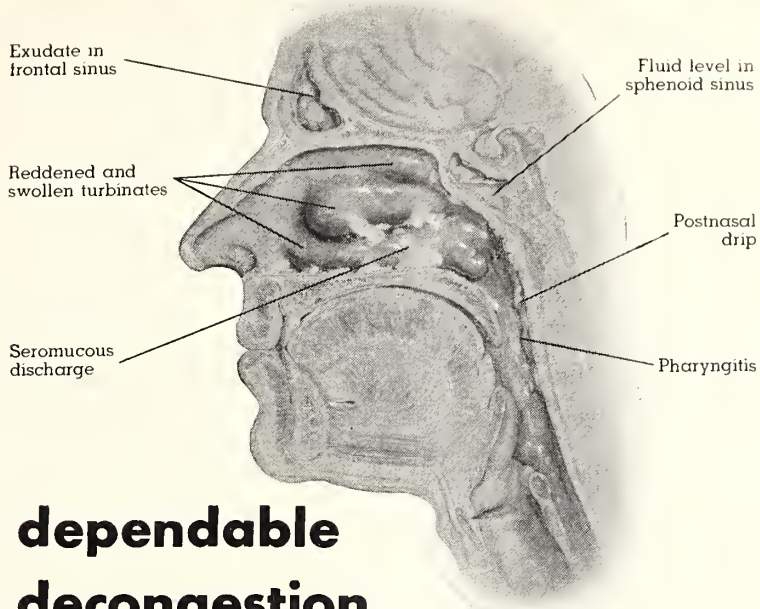
In the United States, Puerto Rico, Alaska and Canada there are approximately 44 million Blue Cross members. This represents 26.59 per cent of the population, which makes Blue Cross the largest prepaid health plan in existence.

Patient population in the nation's mental hospitals rose from 636,000 in 1946 to 698,000 in 1951, according to the President's Commission on the Health Needs of the Nation.

Fatal accidents in the summer are about 5 per cent above the annual average, according to the National Safety Council.

One out of every seven St. Louis Blue Cross Plan subscribers and their dependents used Blue Cross Service in 1951.

There are 161 hospitals in Missouri, with a bed capacity of 37,694. The average per cent of occupancy in all Missouri hospitals every day is 85.1 per cent.



dependable decongestion

in colds, sinusitis, allergic rhinitis

Through its prompt and prolonged decongestive action Neo-Synephrine not only restores nasal patency during all stages of the common cold, sinusitis or allergic rhinitis, but also helps to reestablish and protect the physiologic defense mechanisms of the nasal cavity: and encourages proper sinus drainage and aeration.

Neo-Synephrine's powerful vasoconstrictive action is exerted with virtually no sting, congestive rebound, or systemic side effects and is undiminished after repeated use.

NEO-SYNEPHRINE® Hydrochloride

Brand of phenylephrine

Rapid and Sustained Relief

¼% solution (plain and aromatic), 1 oz. bottles
½ and 1% solutions (when stronger vasoconstrictive action is needed), 1 oz. bottles
½% water soluble jelly, ⅝ oz. tubes

Neo-Synephrine, trademark reg. U.S. & Canada.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Missouri Medicine in Review

Leo H. Pollock, M.D.

OCTOBER 1913

R. M. Funkhouser, M.D. . . . President's Address at the 56th Annual MSMA Meeting: "I, for one, believe that repeated public, open consideration and agitation of the subject of venereal disease should be made . . . estimated that 60 per cent of all males contract gonorrhea at some time of their lives. In larger cities . . . as high as 90 per cent. . . . Religion alone will not regenerate the human race. There must be something physical to build on. Think of nearly 80 per cent of the surgical treatment of women being due to venereal infection and 70 per cent of all diseases treated by gynecologists due to the same. . . . From 70 to 80 per cent of ophthalmia in the newborn . . . and over 20 to 30 per cent of all blindness is due to gonorrheal infection. . . . Forty per cent of all miscarriages are due to syphilis . . . action of the Indiana Legislature, compelling parties contemplating matrimony to submit to an examination has been considered too radical and drastic. Every woman contemplating matrimony should demand of her affianced a clean bill of health. If parents fail, who is more fit to undertake this task and duty than the state?"

OCTOBER 1928

Frank G. Nifong, M.D. . . . President's Address at the 71st Annual Meeting: ". . . The State of Missouri motto is 'The Welfare of the People Is the Supreme Law.' It might well be rendered the 'health of the people,' for without health, happiness cannot exist. The state is shirking her duty in not completely training men in medicine. She makes a gesture, it is true. The University furnishes two years training and then sends her students to other states and other institutions wherever it is possible for such orphans to be cared for. She is a marsupial alma mater. Is this not a pitiful situation and is there not cause rather for shame than pride?"

OCTOBER 1943

The regular AMA session was not held, but the House of Delegates met in Chicago in June.

Dr. Elliott Proctor Joslin, Boston, was selected to be the recipient of the Distinguished Service Award. . . . Dr. James E. Paullin, Atlanta, was installed as President for the year 1943.

Dr. Earl C. Padgett, Kansas City, presented an address at the meeting of the American Surgical Association in Cincinnati.

The surgery building of State Hospital No. 2 at St. Joseph has been named Panettiere Hospital in honor of Dr. A. H. Panettiere, killed in military service.

Dr. Evarts A. Graham, St. Louis, was selected to receive the Lister award for distinguished contributions to surgical science. He is the seventh person, the second American, to be named for the award.

It is understood that Surgical Care, Inc., of Kansas City is now under way. This is a prepaid surgical care plan operating on a contractual basis.

Capsule Clinics

Irving A. Wien, M.D.

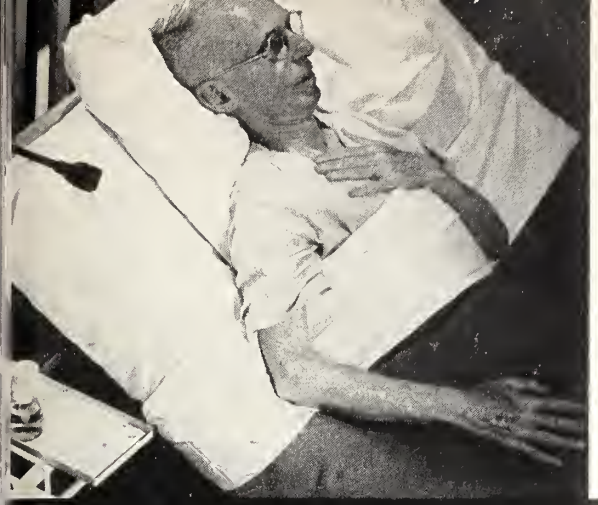
• Rauwolfia serpentina causes a lowering of the blood pressure and is well tolerated. Wilkins, R. W., and Judson, W. E.: New England J. Med. 248 (January 8) 1953.

• The anal canal begins at the anorectal line, which is slightly below the level of the apex of the prostate in the male and the perineal body in the female and ends at the anal orifice. Its length is 3 Cm. and its circumference is from 5 to 9 Cm. Bacon, H. E.: Anus-Rectum-Sigmoid Colon, J. B. Lippincott Co., Philadelphia, 1949.

• While there was some tendency towards decreased gingival bleeding when a chlorophyll dentifrice was used, there was no effect upon reducing decay activity. Kutscher, A. H., and Chilton, N. W.: Journal Kansas City District, Dental Society 29 (May) 1953.

• In the field of urologic surgery antibiotics have played a part in decreasing the mortality as well as the morbidity rates. The mortality rate has been reduced from 16 per cent to 5 per cent in the last 75 cases. Buford, E. H. Geriatrics 8 (March) 1953.

• It is possible in approximately 10 per cent of patients to have a normal visualization of the gall bladder and still have chronic gall bladder disease. Winkelstein, A.: Geriatrics 8 (March) 1953.



Terramycin®

BRAND OF OXYTETRACYCLINE

an agent of choice in urinary tract infections

- *promptly effective against a broad-spectrum of urinary pathogens*
- *high concentration in active form in urinary tract*
- *well tolerated, even upon prolonged administration*

Terramycin is acclaimed by urologists everywhere for unsurpassed action in

chronic urinary tract infections

acute urinary tract infections

urinary tract surgery

"The resistant cases showed remarkable response."[1]
". . . has cured where all other antibiotics have failed."[2]

"Patients with pyelitis were well and doing their usual duties within 24 hours . . ."[3]

"Morbidity from apparent genito-urinary causes was noted in only one patient of 44 patients who received prophylactic Terramycin."[3]

"Terramycin is generally well tolerated, the percentage of relapses being low and the percentage of bacteriological as well as clinical cures high."[2]

1. Ferguson, C., and Miller, C. D.: J. Urol. *67*:762 (May) 1952.
2. Trafton, H. M., and Lind, H. E.: Ibid. *69*:315 (Feb.) 1953.
3. Blahey, P. R.: Canad. M. A. J. *66*:151 (Feb.) 1952.

Pfizer

PFIZER LABORATORIES BROOKLYN 6, N. Y.
DIVISION, CHAS. PFIZER & CO., INC.

President's Comments

An act which was passed by the General Assembly, known as Senate Bill 375, provided, among other things, for exemption from state income taxes of all expenses paid by a taxpayer for medical care. This act was vetoed by the Governor on July 13 and, as a result, will not become a law.

In the veto message the Governor stated that he had no objections to the amendment exempting expenses for medical care; however, another section of the act dealing with an entirely different part of the law was not properly drafted and would cause confusion. Therefore, Senate Bill 375 was vetoed.

Members who may have advised their patients of the medical expense exemption proposed in Senate Bill 375 should explain that the law remains as it was before and that the deduction from state income tax for medical expenses will apply only when such expenses exceed 5 per cent of taxable income.

Elbland Bohrer

Others Say

Need Is for GP's

. . . The student needs to know the common diseases and usual procedures, not the bizarre maladies and exotic treatments. Each state has its greatest need for the family doctor. I believe, therefore, that the medical school should plan its curriculum with that in mind.—W. Clarke Wescoe, M.D., *Kansas City Times.*

". . . and the living is easy"

"Where else can I walk to my office from my home wearing a soft shirt without a tie, with work pants, and a hat that's suitable for fishing? Where else can I keep an old gun, rod, mud boots and a burlap sack in the back seat of my car and nobody think anything of it? Where else can I tend my own chickens, plant potatoes and sweet corn, and still take care of patients? I like living this way and never have desired to swap it." This summary of country practice is quoted in a feature by Conwell Carlson in the *Kansas City Star* describing his interview with George P. Morse, M.D., 82 year old physician of Ludlow. Dr. Morse is completing fifty-one years of practice in this northwest Missouri town.

Buchanan County Beams

Congratulations to Dr. Petersen . . . President-elect of the State Medical Association. The first time, by the way, that this honor has been in our society since 1915 when the late Dr. C. R. Woodson held this office. Dr. Pete is the sixth St. Joseph man to hold the office since the founding of the State Association in 1850. . . . Dr. Peterson has served faithfully on the Council . . . since 1944 and has been Secretary of the State Association for the past four years.—*Buchanan County Medical Society Bulletin.*

"Go Rural"

. . . With the tendency still increasing toward more and more training there is going to be a greater and greater void in rural areas and small towns. This will go on to a point where the void is so great and poignant as to be attractive. In fact, our thesis is that this point has been reached. Today there are fine opportunities in our rural areas. A doctor would be received with open arms—he would at once have a practice and a good income. He would have fast friendships in his community where he would be a respected and substantial individual. He could easily stimulate his community—or several communities—to build hospitals. Unless you aspire to the gregarious environment of very highly trained men awaiting and waiting for a practice—take a two . . . or three years of internship . . . GO RURAL . . . and be happy, contented, and prosperous.—F. T. H'Doubler, M.D., *Greene County Medical Society Bulletin.*

Consulting Room Semantics

. . . Your patients and mine bought more automobiles last year than any time in history; they bought more TV sets than ever before; they bought 430 billion cigarettes, and they spent over three times as much just on the tax on liquor than the entire bill for dentistry. I've never known of anyone who didn't have money for the things they really want, did you? Let's give people the opportunity to invest in dentistry, several Kinds of dentistry. Remember, not everyone invests in a $1,000 life insurance policy—some buy a million. Not everybody wants a Ford—lots of 'em buy Cadillacs. Not everybody wants an $8,000 home—plenty of people in your town and mine live in $80,000 homes—so it's my idea to offer every patient the opportunity to invest in several kinds of dental service. . . . When we look around us, we find that dentistry is still one of the cheapest commodities. . . . People should be reminded that they don't spend money for dentistry, they invest in dentistry . . . you don't repair a tooth—you rebuild it . . . you don't pull a tooth—you remove it . . . you don't grind out a cavity—you prepare it. You and I write a check so much more willingly for a motor that has been factory rebuilt than one that has just been *repaired.* Yes . . . everyone of us can help himself . . . in the choice of words.—Hollis A. Askey, D.D.S., "The Listening Chair," *Kansas City District Dental Society Bulletin.*

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 October, 1953 Number 10

LACERATIONS OF THE FACE

DOUGLAS W. MACOMBER, M.D.
DENVER, COLORADO

FACIAL INJURIES challenge knowledge, skill and resourcefulness. They present incomparable surgical opportunities for restoration or preservation of function and acceptable appearance. Early closure of wounds, before bacteria have invaded the surface and inevitable fibrosis has caused distortion of tissue, is an immediate responsibility.

Diagnosis should be made as in any medical or surgical problem. Is tissue missing; is it so crushed, mutilated or tattooed with dirt that it cannot survive and provide acceptable appearance upon the face; are parts displaced; has Stenson's duct or a branch of facial nerve been severed; are orbital rim or zygomatic arch depressed or staggered; are jaw bones broken; are foreign bodies present?

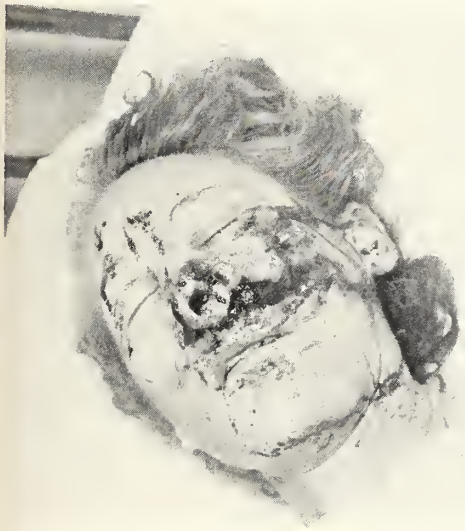


Fig. 1. Large U-shaped flap transects nasal septum and both airways. Note displacement of nose.

Most answers can be determined at once with active cooperation of conscious patients, inspection, palpation, exploration, testing dental occlusion and x-ray study. Whether severely injured patients can withstand anesthesia and further trauma is a matter of judgment. However, the majority may safely undergo repair and closure

Fig. 2. Maximum surgical benefit from one operation performed three hours after accident. Airways were explored and repaired first, then middle and outer layers.

of lacerations within the first few hours. Nerve block or local infiltration anesthesia is appropriate in most cases. Thus, prompt closure is possible and feasible in nearly every case, and definitive results are frequently attainable in one operation.

Initial cleansing is best performed with abundant white soap and water followed by normal saline solution irrigation. Chemical antiseptics merely add to the trauma. If one washes bacteria away, there is no need to kill them with substances which inflict equal damage upon tissue cells. Furthermore, if time has elapsed and bacteria

Presented before the Missouri State Medical Association, April 26-29, 1953.

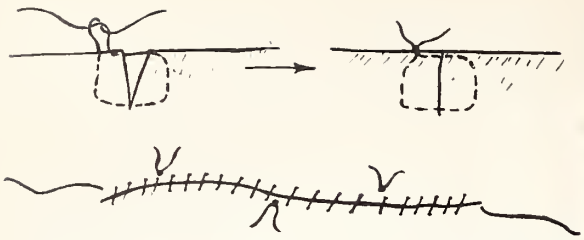


Fig. 3. Diagram of vertical half mattress stitch. It may be retained for a few days longer, with less danger of cross scarring, than ordinary stitches. A continuous stitch is a time saver in extensive suturing; it should be removed in two or three days.

have invaded the tissues, antiseptics will not reach them anyway (figs. 1 and 2).

Since tissues badly crushed are usually worse hurt than they appear to be, excision of a laceration may be appropriate. Thus, there may be a defect which cannot or should not be directly sutured together, for tension will result in ischemic edges, little or no resistance to infection, separation of edges and added scar from sutures. Ends of lacerations can be extended and subcutaneous tissues undercut, however, and closure usually made with negligible tension except in the larger losses. Elective incisions should always be made in the direction of elastic fibers, natural

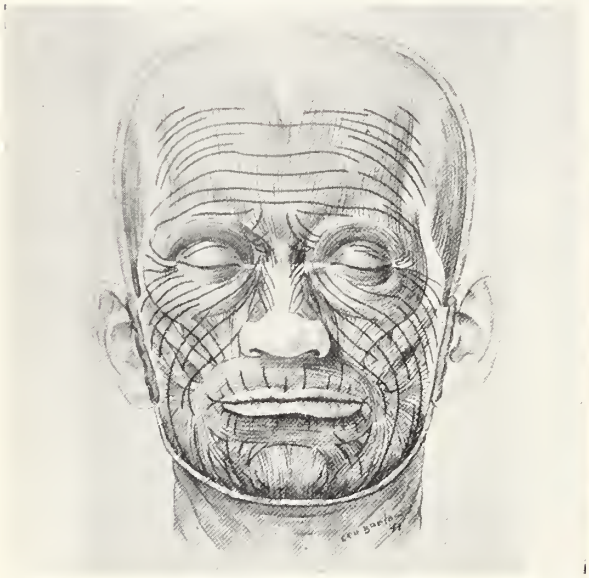


Fig. 4. Lines of expression, perpendicular to underlying muscle fibers except in eyelids, indicate direction for elective incisions or extension of wounds. (From Kraissl and Conway).

creases, and lines of expression in the skin. Langer's lines are mostly perpendicular to the direction of underlying muscles, contraction of which causes overlying skin to wrinkle. Respect for this fact, particularly on the face, will beget minimum scars.

A deep laceration should be closed in layers; for example, in lip or cheek the respective layers of muscle, mucosa and skin are delineated and repaired separately. Salient landmarks—such as border of hair, a line of expression, edge of an aperture, vermilion border of the lip—are defined and aligned. I prefer 4-0 catgut for buried stitches

Fig. 5. Full thickness loss of skin. Spontaneous healing cannot occur except with dense scar formation and more or less displacement of adjacent tissues.

and mucosa and 5-0 nylon on atraumatic needles for skin. If considerable tissue is missing over a cavity and direct closure for any reason inappropriate, edges should be salvaged by opposition and suture of skin to lining. For example, skin

Fig. 6. Prompt healing from full "take" of whole thickness postauricular graft. However, the graft is somewhat curious in appearance, resembling a lightly pigmented nevus.

to mucosa of cheek, skin to skin or mucosa lining the nose, skin to conjunctiva of eyelid (figs. 3 and 4).

A common injury, especially in children who have been in car accidents, fallen upon glass or been bitten by pets is loss of a piece of skin with more or less of its subcutaneous tissue. If these wounds are left open, they form hypertrophied scars—red, sensitive and disfiguring, sometimes with displacement of features, especially angles of eye or mouth or alar rim. Most of the wounds should be closed at once, directly after extension and local undermining or, if too large for direct closure, with a free skin graft. A superior result

Fig. 7. Graft was later excised, wound extended transversely above brow, tissues widely undercut, and direct closure performed without tension. Since original wound was clean, this type of closure might have been done at once. Local tissue and linear scar constitute minimal disfigurement.

will be obtained from a whole thickness (Wolf) graft rather than a split skin graft. A full thickness graft provides better match of color and quality, is more smooth and shrinks less than partial thickness grafts. Every morsel of fat must be removed from its deep surface; it should fit the defect exactly and be sutured meticulously in place. Gentle firm pressure upon it is mandatory for a week and desirable for two additional weeks. Ends of stitches about the graft are left long and tied over the first small layer of dressings; a moistened eye pad is an excellent medium of pressure, and elastic adhesive tape assures gentle uniform pressure. Stitches are removed in five days and pressure reapplied. The posterior aspect of the ear and mastoid region is an appropriate donor site. A pattern of the wound is made, placed behind the ear, half upon ear and half over mastoid and a line sketched with dye about its periphery. After the graft is excised, closure of the donor area is easy with a few vertical mattress stitches. Larger grafts are obtained from the inner side of the upper arm or, in the male, from

Fig. 8. Full thickness loss at alar rim. This early wound is clean and edges are not crushed; it is an ideal indication for a free full thickness graft from ear.

above the clavicle. A local flap of skin and subcutaneous tissue may, in some cases, be rotated or slid over a laceration accompanied by full thickness loss of skin and subcutaneous tissues. The flap is created by extending an incision with

Fig. 9. Wound was closed at once; auricular graft simulates normal rim of nostril; scar is minimal and there is no deformity. Note donor site at junction of middle and lower thirds, left ear.

respect to Langer's lines and undercutting to permit closure without tension. This may give a definitive result at once rather than one which indicates excision or revision of grafts as a secondary measure (figs. 5, 6 and 7).

When full thickness loss has occurred in the lower third of the nose into the airway, a wedge

Fig. 10. Full thickness loss of skin from road friction. Crushed edges of skin, deeply tattooed with dirt and oil, must be considered part of the loss. Early circumstances did not permit surgery.

of ear may be trimmed to fit the defect and meticulously sutured in place as a free graft. The border of the ear simulates an ala, and ear cartilage supplies a bit of support. Broad clean edges, accurately opposed, will nourish a graft a square centimeter or more in size. This graft is an exception to the rule that free skin grafts must be thin and free from fat. However, fatty areolar tissue of the ear, with its abundant capillaries, is able to survive and nourish the skin in these carefully chosen instances. Residual ear deformity, especially when the full thickness wedge is taken at the junction of the middle and lower thirds of the pinna and the wound repaired at once, is not noticeable to an average observer (figs. 8 and 9).

Many facial lacerations are tattooed with road dirt and oil. Unless removed at once, it is there to stay and may demand definitive surgical removal. In my experience, the best instrument for removal of fine foreign material in the skin is a razor blade; several blades are cold sterilized with the other sharp instruments. Tissues are scraped and shaved until every bit of dirt is removed. Jagged and crushed edges, with dirt ground in, should be trimmed by sharp dissection and the defect directly closed or surface grafted as previously described (figs. 10 and 11).

DISCUSSION

The split skin, or partial thickness, graft is the most utilitarian of all grafts. It is of practical value in immediate or early treatment of many wounds. There is no dressing upon a clean raw surface superior to skin. Thus, much may be gained and nothing lost by grafting sliced, avulsed and scraped areas at once or within a few days. This is feasible in clean or fairly clean wounds that have not been badly mutilated, contaminated or crushed, and in which there will probably not be much swelling or exudation. If the wound is deemed inappropriate for immediate closure, it should be washed with white soap and water, irrigated with normal saline solution and dressed with voluminous gauze dressings under firm gentle pressure. Fine mesh gauze is placed upon raw surface, changed daily and kept damp with normal saline solution. Moist dressings are more absorbent than sloppy wet ones. Grease or oint-

Fig. 11. Wound was treated for six days with dressings of fine mesh gauze, damp (not sloppy) with normal saline solution. Edges were then trimmed, granulation tissue lightly freshened by sharp dissection and thick split skin dermatome grafts from flank applied.

ment encourages superfluous exudation, seals the surface, incubating bacteria in warmth, moisture and nutrition inevitably present. Fine mesh gauze sticks less than coarse mesh, for granulation tissue does not enter it as readily, and the patient is not demoralized by pain and depleted by

bleeding. Dressings should be changed once or twice daily until surgery is appropriate. Split skin grafts are applied early, closing the wound, inhibiting fibrosis and averting septic complications. The simplest instrument is a razor knife, with roller a calibrated distance from the edge; it avoids cutting grafts too thick—an error commonly committed by the occasional skin grafter. Such grafts should be about ten to twelve thousandths of an inch thick for less favorable wounds, and perhaps twelve to sixteen thousandths where quality and color of tissue are more favorable. They are applied to raw surfaces under tension approximating that of normal skin, secured with stitches and dressed under gentle pressure. Many wounds which would otherwise remain open indefinitely will thereby be closed promptly. It may, of course, be subsequently excised in stages or replaced by a thicker graft or pedicled flap under relatively favorable circumstances of planned elective surgery if necessary or desirable. (See figs. 10 and 11).

SUMMARY

Treatment of facial lacerations becomes the occasional responsibility of every general practitioner. Most injuries to adults are the result of automobile, sports and industrial accidents; in children, falls and bites from pets are common causes of more or less serious wounds. Early decision must be made as to whether or not immediate repair is feasible. About the face abundant circulation permits surgical liberties which might be dangerous in other parts of the body. Small contused lacerations may be excised, jagged edges trimmed, local subcutaneous undermining performed to permit closure without tension, or local rotation or sliding of skin flaps when tissue has been lost. Extension or addition of incisions must be made with regard to Langer's lines—"the grain of the skin"—in order to beget minimum scars. In instances in which there is considerable loss of tissue, immediate or early free skin grafting may be feasible. If prompt repair of extensive wounds about the nose or mouth is not possible or feasible, skin and mucosa should be joined about borders of the cavities. No raw surface or edge of a wound need be left unclosed.

In nearly every instance lacerations may be debrided and closed, wounds into nasal or oral cavities repaired or edges salvaged, and large abrasions covered with split skin grafts. Thus sepsis, deep fibrosis and distortion of features is avoided. Maximum surgical benefit is often the primary result. If secondary revision or reconstruction is indicated, the problems are immeasurably simplified.

1800 High Street.

BOOK REVIEWS

METABOLIC METHODS by C. Frank Consolazio, Chief of Biochemistry, United States Army Medical Nutrition Laboratory, Chicago, Ill. Robert E. Johnson, M.D., D.Phil. (Oxford), Professor and Head of the Department of Physiology, University of Illinois, Urbana, Illinois and Evelyn Marek, M.A., Biochemist, United States Army, Medical Nutrition Laboratory, Chicago, Illinois—illustrated. The C. V. Mosby Co., St. Louis, 1951. Price $6.75.

During recent years clinical attention is turning more and more to a consideration of the phase of biochemical imbalance in disease, most particularly in frankly metabolic diseases. The purpose of this book is to present workable methods for the performance of metabolic studies designed to give information concerning the state of metabolic balance. The contents is organized beautifully in its simplicity, with every step in each procedure numbered. Verbose discussions are not to be found, but a concise statement of the principle involved appears at the heading of each determination procedure. There is adequate description of necessary instruments and of methods for collection and preservation of specimens. Alignment charts are used widely throughout the book, enabling the worker rapidly to convert his data to a final answer. This book is unique in its field. It is to be hoped that it will serve the purpose of bringing into the ordinary clinical laboratory an enthusiasm for the performance of this type of study. C. J. S.

HUMAN PELVIS, THE, by Carl C. Francis, M.D., Assistant Professor of Anatomy, Department of Anatomy, Western Reserve University, Cleveland, Ohio. St. Louis. The C. V. Mosby Company. 1952. Price $5.00.

This small, compact, well organized book of less than 200 pages was written with the following objectives in mind: (1) to clarify the great confusion of terminology, (2) to bring forth and perhaps settle some of the apparent conflicts in the interpretation of observations, and (3) to summarize and make available to the practicing physician many valuable studies that have appeared in highly technical journals.

Chapters I to III deal with the anatomy, articulations and ossifications of the pelvic bones.

Chapter IV gives an excellent discussion of the pelvic girdle with its measurements, variations and clinical types.

Chapter V jumps in on the controversial anatomy of the muscle and fascial planes. The important and clinical identifiable fascia is primarly discussed rather than fascia which only a few highly trained anatomic dissectors have been able to demonstrate.

Chapter VI and VII contain the anatomy of the vessels, lymphatics and nerves. The autonomic nervous system is still confusing and much work needs to be done.

Chapters VIII and IX discuss the anatomy of the pelvic portion of the intestinal and urinary tract.

Chapters X and XI deal with the male and female genitalia.

Chapter XII concludes the book with a description of embryology.

This book, as a reference, should have wide appeal since almost every specialist finds himself dealing with pelvic structures at one time or another. The author has intergrated the anatomy of all the structures and viscera of the pelvis and also throughout the book gives various suggestions which can be applied clinically.—J. C. W.

GENITO-URINARY INJURIES

JAMES C. COPE, M.D.
COLUMBIA

THE PRINCIPLES of treating trauma of the genito-urinary system are in no way different from the principles of treating other types of injury. Neglect of these principles will result in more fatalities than the lack of facilities for the specialized procedures used in the diagnosis and treatment of this type of case. A diagnosis of parenchymal rupture with perinephric extravasation is of little avail if the patient subsequently dies of hemorrhage or shock. A history of trauma, with subsequent hematuria, is positive evidence of renal injury, but it in no way excludes the presence of a ruptured spleen or liver. These patients must be examined carefully for evidence of other, often more serious, injuries, and frequent reexamination is mandatory.

When the patient's condition permits, and only when it permits, other diagnostic methods are used. First among these is excretory pyelography. In injuries of both the upper and lower urinary tract, it is frequently the only procedure which is necessary. In the lower urinary tract, urethral catheterization and cystography will give additional information. Cystoscopy and retrograde pyelography are, in my opinion, dangerous as an emergency procedure and give no usable information which cannot be more safely acquired by other methods.

RENAL INJURIES

Trauma of the kidney is of two types, penetrating or nonpenetrating. Penetrating wounds of the kidney are rare. Of 2,385 abdominal gunshot wounds in World War I, only 5.4 per cent had renal involvement. Even more rarely is the kidney alone involved, and prompt surgical exploration is usually needed for the repair of the other injuries.

Nonpenetrating injuries are fairly common. These injuries range in seriousness from contusion, evidenced by a mild transient hematuria, to sudden fatal hemorrhage from a torn renal pedicle. The diagnosis of renal injury is usually easy. There is a history of trauma followed by the passage of bloody urine. The degree of hematuria is usually proportional to the degree of trauma. When seemingly trivial injury is followed by severe bleeding, preexisting disease or congenital abnormalities should be suspected. Rarely, the ureter may be obstructed or torn, and no hematuria is present. Costovertebral angle and upper abdominal spasm and tenderness are present. Occasionally, in the more serious injuries, a mass may be felt in the flank. Shock is not severe except in the most grave and serious cases. The presence of profound shock, when the hematuria is minor and no flank mass has developed, means other injuries are present. Excretory pyelography should be done as early as possible. If attempted in the presence of a lowered blood pressure, no excretion will result and if delayed for twenty-four hours, the reflex ileus, which is almost certain to develop, will make the pictures unreadable. The most important information gained is the state of the uninjured kidney. This information is vital if surgery is contemplated. Should a pyelogram develop on the injured side, it indicates minor injury which will not need surgical treatment. If the x-ray shows a normal, or slightly enlarged, kidney shadow, without function, the damage is intracapsular without perirenal bleeding. These injuries usually may be managed conservatively. Should the x-ray show a large mass in the upper abdominal quadrant which causes a medial displacement of the gas patterns, obliterates the psoas shadow and elevates the diaphragm, extensive perirenal hemorrhage is present and immediate surgical treatment may be necessary.

The treatment of renal injuries is usually nonoperative. Hodges reports seventy-one cases of renal injury. Of these, forty-one were considered to be contusions. In twenty-three the diagnosis was of rupture of the kidney which responded favorably to conservative treatment. In only one of these seventy-one cases was a life-saving nephrectomy necessary. Harbach reports one hundred and five cases of renal injury. Fifty-six were contusions. Of the remaining forty-nine, having renal rupture, thirty-six were treated conservatively. Immediate surgery was done only in those cases in which concurrent injury was present or suspected. Nonoperative management consists of bed rest, replacement of blood and prevention of infection.

Emergency surgery is needed only when hemorrhage threatens life. This bleeding may be external in the form of a gross hematuria requiring constant evacuation of clots from the bladder, or the bleeding may be internal, evidenced by increasing signs of shock, hemorrhage and an enlarging mass in the flank. Secondary bleeding, occurring twelve to twenty-one days after the initial injury, may necessitate emergency surgery.

There is little unanimity of opinion concerning the surgical repair of renal injuries. If this procedure is to be attempted, it should be postponed for from three to four days until the patient's condition has stabilized and the degree of injury evaluated. Here, cystoscopy and retrograde pyelography have a part in the diagnosis, but are not recommended as routine procedures. Usually, adequate information can be gained from the intravenous pyelograms.

Any surgery attempted should be aimed at the conservation of renal tissue, but this is frequently impossible. Hodges reports that in eight cases operated upon, nephrectomy was necessary in seven and repair was possible in only one.

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

Surgery is necessary if the hematoma becomes infected or an abscess develops.

URETERAL INJURIES

Ureteral injuries are rare. From World War I only eight ureteral injuries have been reported. They are accompanied by other more serious injuries which demand emergency treatment. Excretory urograms will help in the diagnosis, but usually ureteral injuries are suspected only when urine is found leaking from the wound, or a postoperative fistula develops.

Surgical injuries of the ureter are fairly common. They occur during major pelvic procedures and urologic manipulations. Prevention is of prime importance. The use of indwelling ureteral catheters during the operation is of some benefit in preventing injury by identifying the ureter and is particularly helpful in the recognition of this accident. If these injuries are recognized at the time of operation, one of the many plastic repairs may be used. End to end anastamosis over a ureteral catheter may be tried. The ureter may be reimplanted in the bladder or a short section of ureter may be formed from the bladder wall. Most often, the situation is discovered only after several hours of postoperative anuria, or after the development of a urinary fistula. The management of this type of injury is usually difficult. Poor results are obtained in so far as the restoration of function is concerned, and nephrectomy is the usual final answer. Certainly, any surgeon doing urologic or pelvic surgery should be familiar with the management of these accidents.

URETHRAL AND BLADDER INJURIES

Injuries of the bladder and urethra at, or above, the level of the urogenital diaphragm present similar clinical pictures. Without the aid of x-ray, diagnosis may be difficult. The history is of injury to lower abdomen or pelvis. There is usually no great pain from the injury and shock may be minimal though the injury is severe. Suprapubic spasm and tenderness are present but may not be marked. The patient may be unable to void, or voids only a few drops of bloody urine. The fact that the patient can urinate does not rule out serious injury. On rectal examination, a boggy hematoma in the area of the prostate may be felt. Frequently the prostate has been torn from its attachments and pulled upward where it cannot be felt.

The diagnosis depends upon the presence or absence of urinary extravasation demonstrated by x-ray. It all cases a catheter should be passed and cystograms obtained. Should the catheter fail to pass on one attempt, this procedure should be abandoned. Further attempts at catheterization with a rigid or semirigid instrument will result in further injury. In such a case urethrograms may be made by instilling contrast media into the urethra. Excretory urograms will sometimes give the desired informaton. The ability to withdraw from the bladder a measured amount of fluid previously instilled is not evidence of an intact organ. This procedure is mentioned only to be condemned. The x-ray demonstration of an intact bladder is the only evidence to be relied upon.

If contrast media is seen outside the urinary tract, emergency surgical treatment is needed. The principles are, in the order of their importance, diversion of the urine, drainage of extravasation, repair of damage, and injuries of the membranous urethra require splinting by an indwelling catheter. When the membranous urethra is completely torn and the prostate pulled away, continuity is reestablished over a Foley catheter and traction maintained until healing is well established. Intraperitoneal bladder tears must be repaired. Extraperitoneal tears need not be sutured; diversion of the urine and drainage are adequate. In all cases a cystotomy is done and the tube left in place. If no extravasation is seen and the patient is able to void, no treatment is necessary. A pelvic hematoma may prevent urination and catheterization for a few days is necessary. In these cases a teardrop bladder will usually be seen on the cystogram.

Injuries below the urogenital diaphragm are usually the result of direct trauma to the perineum. Blood may drip, or may be expressed, from the urethra. A perineal hematoma develops rapidly and may become massive. Associated injury in the pubis is common. Treatment is directed at diversion of the urine by suprapubic cystotomy and repair or splinting of the injured area. Retrograde catheterization, at the time of cystotomy, and leaving the catheter in place for two to three weeks is the usual treatment. Evacuation of the perineal hematoma may be necessary. Impotence frequently follows this type of injury, and stricture formation requiring lifelong urethral dilatations is certain.

In penetrating wounds of the bladder and urethra, concurrent injuries are the rule and require appropriate treatment. In closed injuries this not the case. Most frequent associated injury is fracture of the pelvis. Thirty-five per cent of pelvic fractures involving the pubis will have serious urinary tract damage.

Injuries of the external genitalia defy classification. Repair of lacerations by the most expedient method is indicated. Lost skin may be replaced by split thickness grafts. Testicular injuries usually require removal since atrophy is almost certain.

Professional Bldg.

BIBLIOGRAPHY

Harbach, F. O.; Gibson, L. E., and Lynch, C. H.: New York J. Med. 52:205-208 (Jan. 15) 1952.
Hodges, C. J.; Gilbert, D. R., and Scott, W. W.: J. Urol. 66:627-637 (November) 1951.

TREATMENT OF ACUTE MYOCARDIAL INFARCTION

MICHAEL BERNREITER, M.D.
KANSAS CITY

ACUTE MYOCARDIAL infarction must be treated as an emergency. The treatment is designed to reduce the work of the heart until healing of the infarcted area takes place, to relieve pain, to overcome shock and cardiac failure and to take measures for the prevention and treatment of complications such as cardiac arrhythmias and thromboembolic disease.

Bed Rest.—Patients suffering from acute myocardial infarction should be put to bed for an average of six weeks, to diminish the work of the heart. Experimental studies have shown that at least three weeks are necessary for development of collateral circulation and six weeks to convert the infarct into a firm scar. The management of complete bed rest should be elastic enough to permit modification in patients with orthopnoea, cardiac asthma and pulmonary edema.

Control of Pain.—Relief of pain and apprehension must be the first concern of the physician. There are no substitutes for narcotics for this purpose. Morphine sulfate ¼ to ½ grain subcutaneously or 1/6 grain intravenously, if pain is rather severe, is usually effective. The injections should be repeated if necessary. If large or repeated doses of morphine are used, metrazol 100 to 300 mg. may be given parenterally to counteract respiratory depression.

Antispasmodics help relieve pain, increase the blood flow to the infarcted area by overcoming reflex spasm of the coronary arteries; the most useful drug for this purpose is perhaps Papaverine when administered intravenously in doses of 1 to 1½ grains and repeated if necessary every two or three hours during the acute phase.

Treatment of Shock.—Specific therapy includes the use of (1) pressor amines, (2) transfusions, (3) digitalization and (4) venesection.

Vasopressor drugs: Although the ideal pressor drug has not been found as yet several of the amines now available fulfill most of the requirements. I have recently used mephenternine sulfate (Wyamine, Wyeth, Inc.) exclusively in the treatment of shock associated with myocardial infarction. The significant pressor response in almost all patients was most encouraging and no untoward side effects were observed.

Transfusions: Small transfusions of blood or plasma, if given slow and early, are beneficial, particularly in shock patients with low venous pressure and absent signs of heart failure.

Digitalization: Patients with elevated venous pressure (above 8 cm. of water), pulmonary edema or other signs of cardiac failure should not receive transfusions in any form. To increase cardiac output in these patients rapid digitalization is best achieved by intravenous administration of lanatoside C (0.6 mg. to be repeated in one hour). In addition, mercurial diuretics, restriction of sodium and liquids are necessary if signs of left ventricular failure persist. In extreme cases of pulmonary edema with increased systemic venous pressure, the removal of about 300 cc. of venous blood may be life saving.

Anticoagulation Therapy.—It has been demonstrated that anticoagulants will reduce the number of all types of thrombo-embolic complications in myocardial infarction from 40 per cent down to 5 per cent with a reduction in overall mortality from 23 per cent down to 16 per cent. This is perhaps the most significant recent advance in the treatment of coronary occlusion. As soon as the diagnosis is made a prothrombin time estimation is ordered and if this proves to be normal (100 per cent) the patient receives a "loading dose" of about 1,200 mg. of Tromexan. The appropriate quantity for each day is determined by the daily prothrombin time. The daily maintenance dose averages between 300 to 900 mg. of Tromexan and is preferably given in divided doses. For best results a prothrombin time of two to two and one-half times normal should be maintained. Contraindications to anticoagulation therapy are serious renal diseases, blood dyscrasias, bleeding from any source and severe liver diseases.

If hemorrhage occurs with anticoagulation therapy, the patient receives transfusions of fresh whole blood and intravenous vitamin K, 75 mg.

Treatment of Cardiac Arrhythmias.—Arrhythmias of all types are common after coronary thrombosis. Frequently they are transient but often they persist and should be treated in the usual way. Quinidine is the drug of choice, particularly in auricular arrhythmias. I administer quinidine, 3 grs. three times a day prophylactically to all patients with infarction and 6 grs. four or five times per day to control arrhythmias. Pronestyl has been used successfully, particularly in ventricular arrhythmias. Close clinical and electrocardiographic observation is necessary during the use of quinidine. Increase in intraventricular conduction time (widening of the QRS complex) must be recognized early to prevent further toxic effects of quinidine on the heart itself. Pronestyl (procaine amide) is given orally, 1 gram every four hours with a total daily dose up to 6 grams. If the urgency of the situation makes intravenous administration essential, pronestyl hydrochloride solution may be injected at a rate no greater than 100 mg. (1 cc.) per minute to a total of no more than 1,000 mg. (10 cc.). It is advisable to run an electrocardiographic tracing during the injection to determine immediately cardiac arrhythmias and conduction disturbances (widening of the QRS). Blood pressure readings must be made frequently and the injection stopped if marked hypotension occurs.

Diet.—Only liquids and soft solids are allowed

From the Department of Internal Medicine, St. Mary's Hospital, Kansas City, Missouri.

for the first two weeks. The caloric intake is limited to 1,200 calories. This reduces the metabolic rate, diminishes the work of the heart and promotes better healing of the infarct. A multivitamin capsule is given twice daily. Dehydration should be prevented by adequate fluid intake. If there is persistent vomiting and excessive perspiration, small infusions of 5 per cent glucose in saline may be given intravenously slowly.

Care of Bowels.—No attempt is made to move the bowels for the first three days. Thereafter soft movements may be effected with the aid of mineral oil, 1 ounce on retiring, or if necessary with a small saline enema. The bedpan remains the torture instrument of the times and bedpan murders are still committed. Most healthy people look forward with pleasure to a good bowel movement satisfactorily completed, but the bedpan patient awaits the same procedure with horror. The dutiful nurse shoves the bedpan under him and at times her aim is not too good. After that the patient is on his own. He tries desperately to adjust his anatomy to the unyielding bedpan and balance himself the best he can; all this time he is in a most unphysiologic position to move his bowels and by the time the nurse comes back she frequently finds the bedpan empty and the patient completely exhausted by the ordeal. For these reasons I allow a bedside commode as early as possible, even if the patient has to be lifted out of bed.

SUMMARY

Treatment of acute myocardial infarction has been discussed in detail. Methods to control the pain and state of shock are described. Anticoagulation therapy is the most significant recent advance in the treatment of coronary occlusion. A plea is made to do away with the bedpan as early as possible.

436 Professional Bldg.

The Ethics of Peeve Splitting

. . . about the publicity given to the utterance on fee splitting by Dr. Paul Hawley, secretary of the A.C.S. We thought the problem had been solved basically in 1913, or thereabouts, when the A.C.S. and the A.M.A., agreeing that it was unethical to split fees, made it part of their respective codes of ethics. . . . Last year, in revamping its code of ethics, the A.M.A. again stated that fee splitting in any form was unethical because it was prejudicial to the best interests of patients. . . . Should our own profession be policed by giving publicity in lay publications to infractions of the code of ethics? . . . The profession's decision is clear cut. Continuing the controversy in the public press simply produces another brand of kickback. . . . The argument about improving or harming public relations by press discussions of this particular problem seems to work both ways. What's sauce for the goose is sauce for the gander!—Editorial, "The Ethics of Peeve Splitting," *Wisconsin Medical Journal.*

A TECHNIC FOR USING SUCTION IN CASES OF SNAKE BITE

RICHARD R. GRAYSON, M.D.
PERRYVILLE, MO.

THE COMMONLY accepted emergency therapy for a recent bite by a poisonous snake includes the application of a tourniquet designed to impede venous return from the affected part, incision through the fang marks, application of suction to the wound and administration of polyvalent snake antivenom into the site of injury and by intramuscular injection.[1, 2, 3]

All of these measures are of importance, but the one which has received the least amount of attention in the literature is the method of applying suction to the wound. A mechanical suction device is present in commercially available snake bite emergency kits, and these are acceptable for use in an urgent situation even though the degree of suction produced may be none too strong. A disadvantage to these inexpensive suction devices is that occasionally the nozzle or adapter does not fit over the wound.

Another method which has received some attention in the first aid handbooks is oral suction. It is considered to be a safe procedure so long as there are no open lesions present in the mouth whereby snake bite venom could be absorbed.

It is the purpose of this article to describe a method of producing mechanical suction to the wound of a snake bite which I have found to be effective in four cases, three of which were caused by poisonous snakes.

METHOD

After a cruciate incision is made through the puncture wounds, the glass portion of an irrigating syringe (see photograph) is inverted and applied

over the wound. The small end of the syringe is attached by means of a rubber tube to a suction pump such as is found in an ear, nose and throat unit. The forceful suction produced by the pump

pulls blood and tissue fluid into the barrel of the syringe at a rapid rate. In a few moments, part of the syringe is filled with blood. The syringe then can be removed and the blood released into cotton waste. My practice has been to continue the suction in this manner for ten minutes and then to repeat it every fifteen minutes for one hour.

A note in regard to the incision: apparently the area of the snake bite is usually insensible to pain. Therefore, after brief cleansing of the area, the incision is boldly performed without the use of any analgesic or anesthetic agent.

REPORT OF CASES

Case 1. A 6 year old boy was rushed to the dispensary of an Air Force base in Texas in the summer of 1951 after having been bitten on the thigh by a snake. Investigation later indicated that this was probably a rattlesnake. The boy's mother had applied a tourniquet above the wound immediately after the child had been bitten. Examination revealed a child in no acute distress. There was, however, marked edema and redness of a large area surrounding the fang marks on the thigh, even though the injury had occurred just twenty minutes previously. A cruciate incision was quickly performed without pain, suction applied by the method described and polyvalent snake antivenom administered. The child made an uneventful recovery from the effects of snake bite but developed severe serum sickness on the tenth day. This complication responded well to the administration of ACTH.

Case 2. A 65 year old farmer was seen in the emergency room of the hospital* forty-five minutes after having been bitten on the distal phalanx of the little finger of the left hand by a Copperhead snake. At that time the entire hand was edematous and the lateral two fingers were fixed in flexion. The patient was experiencing much pain. The same measures were applied as in the previous case but this time, because of the small area of the finger involved, it was necessary to modify the suction technic. Since the large irrigating syringe would not fit the wound, an inverted 5 cc. syringe attached to the suction pump was used. This worked satisfactorily. Polyvalent snake antivenom was administered and the patient made an uneventful recovery.

Case 3. A 13 year old boy was seen in the emergency room of the hospital* two hours after having been bitten on the right upper lumbar area of his back by a Copperhead snake. An area of swelling about 12 cm. in diameter surrounded the wound and the patient was, in general, in good condition. The usual procedure, except for use of a tourniquet, was followed in treatment. It was observed that the inverted irrigating syringe allowed efficient suction on this area of the body. The patient made a normal recovery.

Case 4. A 12 year old girl was seen in the emergency room about one hour after having been bitten on the outer aspect of the ankle by a "Black Snake" (a nonpoisonous snake). Fang marks were evident, but no edema, redness or ecchymosis were present. It was noted that the fang marks were much farther apart than in the previously mentioned cases (the fang marks of the Copperhead bites were about 1 cm. apart, whereas in this case the puncture wounds were almost 2½ cm. apart). Tourniquet, incisions and suction were utilized, but no antivenom was given. Again, it was found that the method of producing suction as described was an efficient, neat and practical procedure.

* Perry County Memorial Hospital, Perryville, Mo.

COMMENT

Auxiliary methods of treatment which were used in these cases, but not related directly to the therapy for the effects of venom of the snake, were tetanus antitoxin and penicillin. Secondary suturing of the incision of the finger in Case 2 had to be performed a week later. All of these patients were treated as hospital patients for twenty-four hours after initial treatment.

SUMMARY

1. A method for producing efficient, practical mechanical suction to the wound of a snake bite is described.

2. Four cases of snake bite in which this method of suction was utilized are described. Three of the cases involved bites by poisonous snakes. All patients recovered.

3. Other measures commonly used in the therapy of snake bite are discussed briefly.

BIBLIOGRAPHY

1. Reply to query: J.A.M.A. **148**:781, 1952.
2. Orthenburger, A. I.: Treatment of Snake Bite, Oklahoma M.A.J. **45**:203-238 (June) 1952.
3. Raynolds, A. H.: Tourniquet for Snake Bite, J.A.M.A. **150**:1268, 1952.

Medics' Immunity Not Absolute

. . . a newscaster, employed by the A.F.L. . . . has some remarks to make about doctors that is far from complimentary. Probably very few of our members listen to him. It is customary in this country to turn off the opposition since it is considered that what is said is unimportant, and that none of it is true anyhow. If, however, some of our complacent members listened to Frank Edwards for ten straight sessions they might be surprised to find out what he is passing on . . . his recent report that a few physicians in a Texas city were making a fortune from selling gamma globulin to wealthy patients and rather implying that these were probably just those who were caught. . . . He implies that the acts of the few indicate the real moral tone of the whole profession—and he has millions of listeners. . . .—G. Wilse Robinson, Jr., M.D., Editorial, *Jackson County Medical Bulletin.*

The Pancreas—Carcinoma vs. Pancreatitis

. . . It is essential to become very familiar with the early clinical manifestations of carcinoma of the pancreas. We must take advantage of all laboratory procedures currently available; particularly repeated serum diastase determinations, glucose tolerance studies and serum alkaline phosphatase determinations. The value of roentgenologic examination must be appreciated. However, it remains for the future to develop more specific and selective tests of pancreatic function.—William A. Knight, M.D., and R. O. Muether, M.D., "Carcinoma of the Pancreas," *Southern Medical Journal.*

TREATMENT OF PERIUNGUAL WARTS

LAWRENCE K. HALPERN, M.D.
ST. LOUIS
AND
CLINTON W. LANE, M.D.
ST. LOUIS

THOSE WHO HAVE had occasion to treat the stubborn variety of wart which occurs about the finger nails, undoubtedly have found this an annoying and perplexing problem.

Treatment by such generally known methods as electro-cauterization, electro-desiccation, chemo-cauterization, radiation by x-rays or radium, freezing with liquid oxygen, nitrogen or solid carbon dioxide give only fair results. In certain cases such methods may be contraindicated or undesirable.

For the last six years we have used a simple method of treating periungual and subungual warts with monochloracetic acid and 40 per cent salicylic acid plaster. Without attempting to quote percentages or compare controlled series, we feel from our clinical experience with well over a hundred cases that it has proved to be more successful than any of the mentioned methods of treatment. Also, we have been quite impressed with the excellent results in many resistant cases which had failed to respond to other forms of treatment.

We do not imply that this method is original, since Montgomery[1] has advocated it in treating single and mosaic type plantar warts. Frank[2] more recently described a somewhat similar technic for treating periungual warts and, no doubt, others may have used it in treating warts elsewhere on the body. We thought those who have not used this method and are dissatisfied with the results of their previous efforts might be interested in giving it a trial.

MATERIALS REQUIRED

The only materials required are monochloracetic acid and 40 per cent salicylic acid plaster. Monochloracetic acid can be made up by the pharmacy and is used in 80 per cent aqueous solution, but we have used a proprietary product which is supplied in a 15 cc. glass stoppered bottle.* The salicylic acid plaster is made by several manufacturers.

TECHNIC

A small amount of monochloracetic acid is applied to the entire surface of the wart including the periphery with a wisp of cotton on the fine end of a wooden applicator. This is dabbed on several times, and should be applied so carefully that the liquid does not spread to the surrounding skin or seep beneath the nail. Monochloracetic acid produces no immediate visible change in the appearance of the wart such as whitening and, for this reason, one may at times apply too much. It is painless unless the wart has been previously too closely trimmed, or if there are tiny penetrating fissures on the surface. The usual periungual wart, which is not too thick, does not need to be trimmed first, but the thicker ones should be pared down with a razor blade. If the wart extends beneath the nail, the nail is cut away with nail clippers or scissors in order to expose the entire wart. After the acid has been applied, the wart is covered with a piece of 40 per cent salicylic acid plaster cut just a little larger than the size and shape of the wart. It is firmly pressed in place over the wart and secured with several overlapping strips of adhesive tape. The aim is to keep the salicylic acid plaster firmly adherent to the wart for at least three or four days.

A rubber finger stall is suggested when washing. If the adhesive tape becomes loose, another strip may be applied over the original one. The patient is given a small piece of salicylic acid plaster for replacement, if the original dressing becomes wet. This is sometimes necessary in children, but only occasionally in adults.

Although we always warn the patient that he may experience pain beginning six to twenty-four hours after the treatment, usually it is negligible or minimal. If the pain should become severe, the patient is advised to remove the plaster and soak the finger in warm boric acid or epsom salt solution. Aspirin is helpful in alleviating the pain. This difficulty, which only rarely occurs, may be avoided by not allowing acid to seep beneath the nail and by not completely or too tightly encircling the finger with adhesive tape. Most patients tolerate the slight discomfort without the necessity of disturbing the dressing before the optimal treatment period of three or four days.

When the dressing is removed in three or four days, the entire wart may "shell out" by adhering to the salicylic acid plaster. If it does not, it can be painlessly trimmed out with a pair of small pointed scissors. A necrotic defect is left, which is the desirable reaction. This fills in within about one week, leaving a soft inconspicuous scar less prominent than electro-cauterization scars. A simple band-aid type dressing with a mild antiseptic ointment is all that is required.

The majority of cases require only one treatment. If warty tissue remains, another light application of acid is applied. Unless the original reaction has been negligible due to poor contact of the plaster, it is unnecessary to reapply the salicylic acid plaster.

COMMENT

So often one tries a method of treatment most enthusiastically recommended by others and has no success with it. This is the reason we have elaborated in so much detail about a simple technic, hoping that if carried out as suggested it will prove to be successful in the hands of others.

* "Xine" (trade mark) Georges Supply Co., Washington, D. C.

SUMMARY

A simple method is described for the treatment of the periungual wart, using monochloracetic acid and 40 per cent salicylic acid plaster. This procedure in treating warts is not original, but we have not seen it described in the treatment of this particular type of wart. In our hands, it has been highly successful and more satisfactory than the conventional methods we have used in the past.

462 North Taylor Ave.
3720 Washington Blvd.

BIBLIOGRAPHY

1. Montgomery, Royal M., and Montgomery, Andrew H.: Common Hyperkeratotic Lesions of the Foot, J.A.M.A. **124**: 736-761 (March 18) 1944.
2. Frank, Lawrence: Simple Treatment of Periungual Verrucae, Arch. Derm. & Syph. **65**:617 (May) 1952.

Hemorrhagic Disease of the Newborn:

Multiple studies indicate the presence of vitamin K refractory hypoprothrombinemia from birth to the end of the first year. Actual vitamin K deficiency is always present in breast-fed infants, and nearly always present in those fed artificially. This hypoprothrombinemia with its attendant hemorrhagic tendency can be prevented by administration of vitamin K to the mother or to the infant. Extremely low values are seen in intrauterine asphyxia, where ante-natal treatment is the only possible answer. Prophylaxis administered to the mother is obviously superior to any treatment given the infant. H. Dam, H. Dyggve, H. Larsen, P. Plum, Advances in Pediatrics, Vol. 5, 1952.

Since no known form of vitamin K, either natural or synthetic, acts instantly, the need for treatment must be anticipated. Low prothrombin values are restored to normal in no less than eighteen hours, assuming ideal conditions. Other pathology, such as liver damage, retard the effect markedly. Frantic, last-ditch administration of vitamin K to an infant bespeaks inadequate prenatal care. Daniel B. Landau, Pediatrics, *Hannibal.*

Obesity in Pregnancy:

A survey of 641 women, all weighing 200 or over, by Dr. J. P. Redgwick, presents confirmation of the high incidence of complications in pregnancy. Maternal mortality increased 2:1 over women of normal weight, morbidity increase of 12 per cent, hypertensive disease 27 per cent, toxemias 31 per cent. In the face of these figures, weight control by means of high protein, low carbohydrate, and low fat diet, is mandatory. Special attention is given to prevention of fluid retention with its attendant inevitable weight gain. There is markedly less toxemia in patients whose weight gain during pregnancy has not exceeded 24 pounds. *J. Omaha Midwest Clin. Soc.*, January, 1953.

I heartily agree with the content of this article. Patients who become obese during pregnancy are in greater danger than obese patients who become pregnant. Aside from toxemia, excessive gain predisposes to complications of labor and delivery. Given a choice between a sphygmomanometer and scales in obstetrics, I would give serious consideration to retaining the scales. Ernest E. Wadlow, M.D., Obstetrics, *St. Joseph.*

NEUROLOGIC COMPLICATIONS OF CHRONIC ALCOHOLISM

LOUIS L. TUREEN, M.D.
ST. LOUIS
AND
ANDREW L. HAHN, M.D.
ST. LOUIS

DURING AN EIGHT month period in 1951 a series of cases representing neurologic complications of chronic alcoholism were admitted to the Neurological Service of the St. Louis University Unit of the St. Louis City Hospital. Their incidence seemed surprisingly high. Included in this series are five cases of Wernicke's syndrome, four of Korsakoff's psychosis, one of nicotinic acid deficiency and eight well defined cases of peripheral neuropathy. The following is a review of the more common neurologic lesions accompanying chronic alcoholism, their pathogenesis and treatment and a summary of the case reports which prompted this study.

WERNICKE'S SYNDROME

The hemorrhagic encephalopathy of Wernicke's syndrome has been reproduced by Alexander[1] in pigeons, with significant regularity, with diets deficient in thiamine but which contained adequate amounts of riboflavin and vitamins A, B and D. On a diet deficient in all vitamins, beriberi resulted, but rarely encephalopathy; if thiamine were fed, deprivations of any or all other vitamins for six months failed to produced encephalopathy. Further evidence of the role of thiamine in the pathogenesis of this condition is derived from a study of Chastek paralysis, a disease of foxes wherein is found, at autopsy, a hemorrhagic encephalopathy with a distribution and histologic appearance identical with that of Wernicke's syndrome.[2] All animals affected by this disease had been on a diet containing more than 10 per cent of Great Lakes fish, especially carp, and the condition could be prevented by cooking the fish or by administering thiamine in large doses along with the raw fish. Investigation revealed that the fish contain large amounts of a heat labile thiamine-splitting enzyme. Wortis and coworkers,[3] studying eleven cases of Wernicke's disease, found that all had elevated fasting blood pyruvic acid values and an abnormally great and prolonged elevation or pyruvic acid following glucose ingestion. These findings are highly characteristic of thiamine deficiency; they were present in none of 280 control patients with various neuropsychiatric and medical disorders. Despite this wealth of evidence demonstrating a thiamine deficiency in Wernicke's disease, it is generally agreed that this syndrome as seen clinically does not rep-

---

From the Department of Neurology and Psychiatry, St. Louis University Medical School, and the Neurological Service, Unit II (St. Louis University) of the St. Louis City Hospital.
Read before the St. Louis County Medical Society, March 12, 1952.

resent a pure, isolated deficiency but is rather a result of multiple deficiencies, identified and unidentified. Nicotinic acid deficiency is a particularly common accompaniment.[4]

The lesions of Wernicke's disease are confined to the periventricular and periaqueductal gray matter and are characterized by small foci of degeneration, varicose deformity of vessels, subacute necrosis of the adjoining parenchyma, petechial hemorrhages and proliferation of the endothelial and adventitious elements of the vascular walls.

Incidence.—Although Wernicke's disease is widely thought of as being a disorder occurring primarily if not exclusively in alcoholics, there have been numerous series of cases occurring in nonalcoholics, usually in patients with prolonged vomiting or gastric carcinoma[5, 6, 7] as well as in a series of fifty-two cases occurring in British war prisoners of the Japanese,[8] in whom the etiology was acute thiamine deficiency plus, in most instances, dysentary and diarrhea. Most cases recognized in America, however, are in chronic alcoholics; in the series reported by Jolliffee and coworkers[9] only three of twenty-seven patients were nonalcoholic; of Alexander's sixteen patients twelve were alcoholics. Of our five cases all were definite chronic alcoholics.

Signs and Symptoms.—Wernicke's disease occurs usually in individuals with chronic thiamine deficiency but is commonly ushered in by a superimposed acute metabolic stress; this precipitating factor is frequently delerium tremens, or it may be severe protracted vomiting or other somatic illness. The syndrome is characteristically rapid, sometimes dramatic, in onset, or there may be a more gradual development with such symptoms as wavering of the field of vision, diplopia, photophobia and mild memory loss or loss of ability to concentrate. The fully developed syndrome is subject to considerable clinical variation, the most constant features being clouding of consciousness, opthalmoplegias and pupillary disturbances, ataxia and peripheral neuropathy. The clouding of consciousness may vary from mild confusion through stupor to profound coma; it has been attributed to the periventricular and periaqueductal lesions[10] and to diffuse interference with cortical metabolism.[9] The ocular disturbances can be of almost any type. Horizontal and later vertical nystagmus are frequent findings and were present in all of the fifty-two cases of de Wardener and Lennox;[11] simultaneously or subsequently extraocular paralyses usually occur singly or in any combination, lateral rectus involvement being rather common, and this may go on to complete ophthalmoplegia. The pupils are frequently unequal or irregular and may fail to respond to light and accommodation or both and a true Argyll-Robertson pupil may be seen. Ptosis, papilledema and retinal hemorrhages have also been described. Ataxia is usually found when the patient is not too ill to be tested, and is characterized by a broad base and unsteady, staggering gait. Peripheral neuropathy, while rarely emphasized in textbook descriptions, has been present in the great majority of reported cases where its presence or absence has been noted: e.g., twenty-five of twenty-six cases,[11] forty-one of fifty-two cases.[8] Jolliffe's group found that the neuropathy always developed prior to or simultaneous with the ophthalmoplegia. Two of our five cases of Wernicke's disease had definite evidence of peripheral neuropathy.

Many other clinical manifestations may be found: dysarthria, which is rather common; pronounced tachycardia, bradypnea, irregular respiration, high fever, all of which are likely to be found terminally and have been attributed[12] to lesions of the vegetative centers; tremor and rigidity, attributed[13] to lesions of the red nucleus and its connections; and epileptiform convulsions. In treated patients who recover from the acute syndrome there is a high incidence of residual Korsakoff's psychosis; this developed in twelve or thirteen patients in the series of Jolliffe's group[4] and in all three of our series who survived their acute illness. This residual Korsakoff's psychosis bears a good prognosis for recovery; Bowman and coworkers[14] relate the good prognosis to the acuteness of the onset, this being a favorable prognostic sign in Korsakoff's syndrome generally.

Differential diagnosis is ordinarily not difficult; in the presence of an alcoholic history, sudden onset, clouding of consciousness, ophthalmoplegia, ataxia and peripheral neuropathy, with normal spinal fluid, the diagnosis is fairly certain. The difficulties that can arise, however, are well exemplified in our first case.

CASE REPORTS

Case 1. A 29 year old female was admitted to the City Hospital accompanied by relatives who stated that she was weak and confused. They reported that she had been well until one week prior to admission when she began to vomit and began to have ten to twelve watery stools daily; the diarrhea subsided after three days but the vomiting persisted. Two days prior to admission she began having trouble in walking and in picking up things; subsequently her coordination became progressively worse. On the day before admission she was noted to be confused. On the day of admission she complained of headache and was unable to walk or stand; that evening difficulty in swallowing and talking developed.

She lived with her husband and four children and was said to be free of emotional disturbances. The history indicated that she had been eating an adequate diet, and that she drank an occasional glass of beer. She became "tipsy" on rare occasions at a party. The remainder of the history was noncontributory.

Initial examination revealed a well developed, moderately obese white female who was disoriented as to time, but not to place or person. She was confused, and appeared to be acutely ill. Oral hygiene was poor; otherwise the physical examination was not remarkable. Neurologic findings included profound incoordination of the lower extremities; she could not stand nor walk, even with assistance. No muscular atrophies

were noted. Coordination of the arms was also poor, with rebound phenomena and adiodokokenesis present; speech was markedly slurred. Motor strength, however, was good and cutaneous sensation was intact. No deep tendon reflexes could be obtained; there was an equivocal Babinski response on the left. There was slight pupillary inequality and bilateral paralysis of lateral gaze. Vertical nystagmus was present. The uvula deviated slightly to the left. Fundiscopic examination showed moderate degree of papilledema. Speech was dysarthric and a moderate dysphagia was present.

Lumbar puncture showed pressure of 120 mm. of water; clear fluid; 89 erythrocytes; 3 lymphocytes; total protein 63 mg. per cent, serology and colloidal gold curve normal.

On the third day after admission the temperature rose to 104 F. and remained elevated thereafter, unaffected by the administration of penicillin and streptomycin. The following day ventriculograms were made and were normal. Subsequently the pulse rose to 150 to 160 per minute, and persisted high until her death the next day. Her condition deteriorated rapidly, she became comatose, the blood pressure fell to shock levels prior to her death.

About thirty-six hours prior to exitus a history was obtained of heavy prolonged alcoholic intake with almost total neglect of household duties and poor dietary intake. The diagnosis of Wernicke's syndrome was then entertained and large doses of thiamine given intravenously without apparent change in the downhill course. The patient was, however, moribund when therapy was begun.

At autopsy the liver showed marked fatty change. In the brain there were seen at gross examination hemorrhagic areas surrounding the third and fourth ventricles and cerebral aqueduct, and a few punctate hemorrhages in the region of the dentate nucleus. Microscopically, the description was as follows: "Throughout the brain engorged vessels are seen. The main characteristic changes are seen near and around the aqueduct of Sylvius. These changes consist of small and medium sized fresh hemorrhages, sometimes filled with fresh and at other times with older blood elements. Moreover, there is budding of capillaries with endothelial proliferation and hyaline thrombi in the lumen; associated with these changes is proliferation of microglial cells and amyloid fibrillary astrocytes occasionally with a mitotic figure are seen in the proliferating glial cells." There was also fresh extravasation of blood about one portion of the needle tract made at the time of ventriculography.

Case 2. A 60 year old white male was admitted to City Hospital on October 4, 1951, with a chief complaint of weakness. There was no informant except the patient, who was disoriented as to time and place and presented a moderate recent memory defect; the history therefore was not entirely reliable. He admitted to drinking at least a half pint of whiskey per day, and usually more, for thirty years. For two or three years he had noted poor appetite, progressive weakness and a weight loss of about thirty-five pounds. After prolonged drinking episodes he frequently had had periods of nausea, vomiting, hematemesis and melena. Several times he had had "the shakes" and seen "bugs." For two months prior to admission he had been virtually bedfast due to weakness.

Physical examination at the time of admission revealed a well developed, emaciated white male appearing chronically ill. The skin was sallow, dry, rough and of poor turgor, with brownish pigmented spots on the chest and forearms and slight hypothenar redness. The tongue was dry but not reddened or smooth. The heart was normal except for a rate of 140. The liver was enlarged 9 cm. below the right costal border and was hard, smooth and moderately tender. Pubic and axillary hair was scanty and testes were small. Neurologic examination revealed no specific muscular weakness or atrophy; calf tenderness was not noted; deep tendon reflexes in the lower extremities were markedly hypoactive. Cranial nerves were intact. Laboratory studies revealed a leukocytosis of 31,000 with moderate left shift and evidence of moderately severe parenchymatous liver damage; serum diastase was 76.

Therapy on admission included crude liver 2 cc. daily, vitamin K 15 mg. daily, multivitamin tablets two daily, and parenteral vitamins B and C as one half ampule of Ascorbin-B daily.

On October 8 the patient was noted to have developed irregular pupils which failed to react to light and a left divergent strabismus, none of which findings had been present at the time of admission. These findings persisted until death. He developed an irregular fever on October 9 and became progressively more obtunded and on October 12 comatose; his temperature spiked to 103 F. on the night of October 12 and the following day he expired.

At autopsy the significant findings were calcific plaques in the brain; sclerosis of the cerebral vessels; multiple small hemorrhages about the fourth ventricle; fatty liver; pancreatitis with advanced fat necrosis; ascites, and bilateral pleural effusions.

Case 3. A 63 year old white male was admitted to City Hospital July 20, 1951, having been found by police wandering in a park barefooted and confused. The patient had lived alone since the death of his wife about eight years previously, preparing his own meals; his diet was poor, consisting mainly of starches. He was said to have "gone downhill mentally" gradually since his wife's death. A sister, who saw him infrequently, said he tended to be seclusive and asocial. There was no known history of alcoholism. No further history was available.

Physical examination at the time of admission revealed a well developed, rather poorly nourished white male appearing somewhat younger than the stated age of 63, in no acute distress. He was disoriented as to time and place and had a profound recent memory defect; he frequently called for his wife, conversed with hallucinatory voices and laughed inappropriately. He was markedly confused, but cooperative. There was slight reddening of the angles of the mouth; the tongue was slightly thickened and reddened. There was a moderately loud harsh aortic systolic murmur and a right indirect inguinal hernia; general physical examination was otherwise not remarkable. On neurologic examination there was weakness of dorsiflexion of the feet bilaterally; motor power was otherwise normal. There was a slight intention tremor of the hands; the gait was broad-based and staggering. Pain sensation was diminished in the lower extremities. The pupils were normal but there was complete paralysis of lateral gaze bilaterally and a slight right internal strabismus. The knee and ankle tendon jerks were absent bilaterally; upper extremity reflexes were normal as were the abdominal and cremasteric.

The patient was treated with a high vitamin diet,

plus supplemental vitamins B and B complex orally and parenterally. There was gradual improvement in the extra-ocular weakness. On July 30 he was noted to be confabulating. By September 10 the ocular disturbances had entirely cleared up and the patient walked unaided with an essentially normal gait. On September 22 it was noted that except for the persistence of confabulation, he appeared well, and the neurologic disabilities had otherwise disappeared. On September 24 he was transferred to the St. Louis State Hospital.

Case 4. A 38 year old white female was admitted to the City Hospital June 22, 1951, complaining of some visual diminution, diplopia and dizziness. She had drunk large quantities of alcohol, mostly wine, for several years, and had been a patient at the City Hospital in 1949, when a diagnosis was made of delirium tremens and Laennec's cirrhosis. A week prior to admission she began complaining of pain in the eyes and a blurring of vision; at that time it was noted that she had an internal strabismus, and she became aware of diplopia. She continued to drink heavily of beer, wine and whiskey; a few days later dizziness developed and she became confused and disoriented.

Physical examination at the time of admission revealed a well developed, rather poorly nourished white female who was confused and disoriented as to time and place; she was cooperative but unable to answer most questions. General physical examination was not remarkable. On neurologic examination she was noted to have moderate calf muscle atrophy without remarkable muscle weakness; there was a fine tremor of the fingers and she performed rapid alternating movements rather poorly. There was no muscle tenderness nor was there sensory loss. The eyes presented complete paralysis of lateral gaze bilaterally with marked internal strabismus; otherwise the cranial nerves were normal.

She was put on a high caloric diet with addition of thiamine 100 mg. twice daily and vitamin B complex 2 cc. twice daily; on June 26, nicotinic acid 50 mg. three times daily was begun. On June 24, there was definite partial return of lateral rectus function; on June 26, extra-ocular movements were completely normal and there was no strabismus. She remained, however, "too dizzy to walk"; on June 27 she was first noted to confabulate, believing that she left the hospital for long trips daily. Recent memory became increasingly impaired and she was completely disoriented. Vitamin therapy was continued. On July 8, she began ambulating without assistance and was free of dizziness; on July 9, the confusion and memory defect began to clear. On July 13, she left the hospital, ambulatory but still moderately confused and slightly confabulatory.

Case 5. A 44 year old white female was admitted to City Hospital November 26, 1951, with a chief complaint by informant of stupor. The patient had for many years drunk heavily of alcohol, mostly wine, and had been a "poor eater." About a year prior to admission she had first noted slight weakness and numbness in the legs on walking; this was slowly progressive but unaccompanied by any disturbance of gait. Also for about a year she had had intermittent vomiting, no more than once a day, unrelated to food. About three months prior to admission she began complaining of blurred vision on reading; a month later she began vomiting more frequently, two or three times daily. Five weeks prior to admission she was noted to be getting "nervous" and irritable, sometimes repeated the same story over and over, and developed some impairment of recent memory. Two weeks later she was laid off her job and began drinking more heavily; after another week she began complaining of diplopia. Two days prior to admission she was having trouble articulating; speech was slurred and indistinct and in addition was often irrelevant and confused; she seemed "dopey." The vomiting increased to the point at which she could keep nothing down. On the day of admission she was completely irrational and combative; she appeared not to understand what was said to her nor to recognize friends or the environment. That morning she emitted a piercing scream and went into a position of marked flexion rigidity for about ten minutes; no clonic movements were observed.

Physical examination on admission revealed a pulse rate of 110 per minute and a temperature of 102.6 F. The patient was a well developed, rather poorly nourished female appearing acutely ill, mumbling in a mostly incoherent fashion; an occasional phrase could be understood. She was resistive to examination. Oral hygiene was extremely poor and the neck was slightly stiff; general physical examination was otherwise not remarkable. Neurologic examination, necessarily limited by the clouding of consciousness, revealed the following: bilateral wrist drop, with no other apparent motor impairment; impairment of coordination; extreme calf tenderness bilaterally; deep tendon reflexes present throughout and somewhat hyperactive in the upper extremities; Hoffman reflex bilaterally positive. The pupils were unequal and the left reacted poorly to light; there was bilateral weakness of lateral gaze with varying strabismus, and wandering nystagmoid movements were present.

Therapy was undertaken immediately upon admission and consisted during the first week of intravenous fluids; a liter of 5 per cent glucose was given twice daily, each liter containing vitamin B complex 5 cc., thiamine 100 mg., and ascorbic acid 300 mg. As soon as she was able to take oral medications she was started on three brewer's yeast tablets and one multivitamin tablet three times daily, as well as a high caloric diet.

The initial improvement was dramatic; within twelve hours there was marked lessening of the calf tenderness, stupor and incoherence. Within two days there had been complete remission of the eye changes, calf tenderness and wrist drop; there remained slight slurring of speech, a broad-based, unsteady gait and confusion; patient was disoriented as to time and place. By December 1, a somewhat unsteady gait was the only neurologic abnormality. On December 8, confabulation was first noted—"I had a good talk with mother this morning." This increased and was accompanied by profound recent memory loss. High dosage vitamin therapy was continued with daily dosage of 100 mg. thiamine, three multivitamin tablets, six brewer's yeast tablets, and 2 cc. of Navitol. During the ensuing several weeks there was little change in the patient's condition. On about January 3, a Parkinsonian tremor of the head and hands was noted; this continued to the time of discharge. This was unaccompanied by rigidity or of Parkinsonian facies. About the second week in January her mental status began improving; confabulation gradually dis-

appeared, patient again became oriented in all spheres; however a considerable recent memory loss persisted. She was discharged from the hospital on February 2, 1952.

KORSAKOFF'S PSYCHOSIS

This is now generally regarded as the psychiatric syndrome of the chronic alcoholic encephalopathies. It presents as its most striking features the symptoms of confusion, disorientation, memory loss and confabulation. Peripheral neuropathy is also an integral part of the picture as Karsakoff (quoted in 15) originally described it. However, while some degree of polyneuropathy is present in most all instances of the syndrome as it occurs in alcoholics, cases have been cited in which neuropathy was absent, and the psychiatric syndrome may occur under other circumstances, as following head trauma.[16] This has led to some confusion regarding terminology, not as yet completely resolved. The peripheral neuropathy seen with Korsakoff's syndrome does not differ from the "alcoholic" neuropathy which is discussed, either in the clinical picture or in response to therapy. There is some evidence that vitamin therapy is of value in treatment of the psychosis also,[14, 17] but, while the evidence is suggestive, it is not definite. We have discussed the frequent occurrence of Korsakoff's psychosis following Wernicke's disease.

CASE REPORT

Case 6. A 30 year old white male was brought to the City Hospital in a weakened and confused state. There was a history of sporadic, but heavy drinking, chiefly of whiskey, for fifteen years; for two years he drank daily, and during the six months prior to admission he consumed two quarts of whiskey daily, and ate very little. Weakness developed over a period of weeks and incapacitated him for a period of three weeks. Two weeks prior to admission he became confused, believing he was at his regular work as a cook, though actually he was constantly confined to bed; he confabulated and appeared to hallucinate the presence of people at his bedside.

He was well developed but poorly nourished on admission to the hospital. He was cooperative but disoriented as to time and place, and manifested a profound memory loss for recent events. Mild confabulation was present. He was unable to stand, or even to sit up in bed without assistance, and all movements were poorly executed, with considerable pain in the muscles. The skin showed a brownish pigmentation, the liver was enlarged three centimeters below the right costal border. Neurologic abnormalities consisted of profound peripheral motor weakness of both upper and lower extremities with bilateral foot drop and moderate atrophy of the calf muscles on both sides. There was moderate tenderness of the calf muscles; generalized hypesthesia and hypalgesia of the body, with impairment of vibratory and position sense in both upper and lower extremities. Deep tendon and superficial reflexes were absent throughout. Cranial nerves were intact, except for easy fatiguability of facial, ocular and palpebral muscles.

For a period of six weeks, daily doses of 100 mg. of thiamine, together with multivitamin capsules four times a day, were administered. At the end of this time he was oriented in all spheres, no longer confabulated; however, his recent memory remained impaired. Tenderness of muscles improved, but contractures of the calcaneus tendons developed. Additional treatment consisted of high protein diet, with supplemental feedings, multivitamins (B complex and C) parenterally, testosterone 25 mg. daily, and crude liver extract. Physiotherapy was instituted. Improvement was slow but persistent and on discharge, three months after admission, the patient was ready to carry on his normal activities.

NICOTINIC ACID DEFICIENCY ENCEPHALOPATHY

This entity was so termed by Jolliffe and is illustrated by the case to be presented. In 1933 Bender and Schilder[18] in classifying the encephalopathies occurring in chronic alcoholics described one group characterized by clouding of consciousness and changing rigidities in the limbs, often accompanied by grasping and sucking reflexes and support reactions; in their group of patients (an autopsy series) death had occurred in two days to six months. In 1939 Cleckley, Sydenstricker and Geeslin[19] described nineteen cases of "hebetude grading into profound stupor" without other findings of nicotinic acid deficiency except in some instances a dry red tongue. In only two of these cases was there an alcoholic history. Sodium nicotinate therapy resulted in dramatic cure in fifteen and marked improvement of the remaining four in two to ten days. Six illustrative case histories are given, and in one of these the presence of sucking and grasping reflexes is noted. Jolliffe and coworkers[20] in 1940 presented one hundred fifty cases of a syndrome occurring in chronic alcoholics which they termed nicotinic acid deficiency encephalopathy. This group is separated from pellagra by the characteristic clinical picture of encephalopathy and the frequent occurrence without the usual skin and mouth lesions of pellagra; the authors suggest that it may be due to acute complete nicotinic acid deficiency. The clinical picture is characterized by clouding of consciousness, cog-wheel rigidities of the extremities and uncontrollable sucking and grasping reflexes. Although a similar clinical syndrome may occur in other conditions, the response to therapy completes the diagnosis.

This syndrome has been referred to in more recent works and has been officially recognized as a stigma of niacin deficiency.

CASE REPORT

Case 7. Nicotinic Acid Deficiency Encephalopathy. A 57 year old white male was admitted to City Hospital having been found by the police lying in the street in a confused and semistuporous condition. History was unreliable but the patient admitted to drinking heavily for at least eight years, consuming a fifth or more of wine daily. He also complained of weakness in his legs for five or six years and intermittent aching pain in his knees attributed by him to "arthritis." Dietary history was poor, the patient stating that he ate seldom and ate little when he did eat.

Physical examination at the time of admission revealed a well developed poorly nourished white male, lethargic and moderately confused. Temperature was 103.6 F. rectally, pulse 100 per minute, respirations 32 per minute, blood pressure 130/70. Skin was dry and the tongue was magenta colored and smooth along the edges. In the left lung base posteriorly vocal fremitus was increased and there was a moderate number of medium coarse moist rales. The liver was palpable one finger breadth below the right costal border and was nontender. General physical examination was otherwise within normal limits. On neurological examination the gait was noted to be broad-based and unsteady; sensation was intact and there was no calf tenderness; there was generalized muscular weakness; deep tendon reflexes were present throughout and normally active. Babinski was negative bilaterally and cranial nerves were intact.

On the following morning, about seven hours after admission, he was found to be disoriented as to time and place, confused and rather markedly obtunded; there were uncontrollable grasping reflexes of both hands and a pronounced uncontrollable sucking reflex; there were changing rigidities of all four extremities, more marked in the arms. A diagnosis of nicotinic acid deficiency encephalopathy was made, in addition to the previous diagnosis of chronic alcoholism, left lower lobe pneumonia and possible Laennec's cirrhosis. Therapy included penicillin; vitamin B complex and vitamin C in large doses (one ampule of Ascorbin-B intravenously daily); thiamine chloride 100 mg. per day; and nicotinic acid 900 mg. per day. Within twenty-four hours he showed marked improvement and within seventy-two hours the patient was mentally clear, the sucking and grasping reflexes and rigidities were completely absent and the tongue had shown much improvement in color; the gait was still a little unsteady but nearly normal. The pulmonary infection cleared without incident and the patient was discharged eleven days after admission, asymptomatic.

PERIPHERAL POLYNEUROPATHY

Etiology.—That nutritional deficiency is the etiology of the polyneuropathy occurring in chronic alcoholics is now generally agreed. While there is not complete agreement as to the precise nature of the deficiency, there is no doubt but that it involves primarily the B vitamins, especially thiamine. In experimental animals peripheral neuropathy has been produced by diets deficient in thiamine on[22, 23] or in the entire B complex[24] and symptoms of polyneuropathy have been produced in human volunteers maintained on thiamine deficient diets,[25, 26] symptoms developing in four out of five subjects after an "estimated absolute deficiency" period of 2.1 to 5.4 days.[25] That the diet of the chronic alcoholic is deficient in thiamine has been demonstrated by Jolliffe and coworkers[26] who found, assuming the maximal caloric utilization of alcohol to be 1,600 calories per day, that all of twenty-six alcoholics with polyneuropathy had a thiamine intake less than the predicted requirement, whereas in all of eight without neuropathy thiamine intake exceeded predicted requirement. Clinical improvement can be demonstrated in patients with polyneuropathy when a diet poor in B complex vitamin is supplemented with thiamine[28, 29] or when the patient is given his usual intake of whiskey plus large amounts of B complex.[30] Further evidence of thiamine deficiency in "alcoholic" polyneuropathy is the finding of Bueding and Wortis[31] that all of twelve patients with neuropathy had elevated fasting blood pyruvic acid levels.

In opposition to the concept of neuropathy as due purely to thiamine deficiency it has been emphasized[32] that in most instances a major food source of one of the B vitamins is also an adequate source of the others and that therefore isolated deficiency of one of the group is clinically uncommon. This is undoubtedly true, and no investigator recommends therapy with a single vitamin; nevertheless, it is considered by most workers that thiamine deficiency is "the dominant deficiency which gives the coloring to the syndrome" (Jolliffe[33]).

Strauss[30] in 1935 stated that "'alcoholic' polyneuritis may be regarded as similar to the polyneuritis of beriberi and treated accordingly," and the identity of these two entities is now generally accepted.[26, 30] There are, however, still a few dissenting voices; Bean, Franklin and Sahs,[34] for example in 1950, emphasized in discussing peripheral neuropathy the possibility that nervous tissue with its narrow range of function may react to a variety of metabolic disturbances with "a fairly stereotyped pattern of results."

Pathology.—The rather few pathologic descriptions of peripheral nerves in "alcoholic" polyneuropathy found in the literature have been reviewed by Jolliffe.[33] The changes seen do not differ from those seen in nonalcoholic neuropathies and consist of myelin sheath degeneration, axis cylinder degeneration in more advanced cases and the absence of inflammatory changes. It should be emphasized that functional disturbances, i.e., clinical evidence of mild neuropathy, may exist in the absence of demonstrable pathologic change in the nerves.[35]

Incidence.—The proportion of chronic alcoholics who will be found to have peripheral neuropathy varies, of course, first with the severity and duration of alcoholism and thus of dietary deficiency, and second with how vigorously the evidence of neuropathy is sought. In two large series of chronic alcoholics the evidence of neuropathy was found to be 16 per cent[36] and 22.6 per cent[37]; a similar incidence of 17 per cent has been found in a series of cirrhotic patients.[38] Blankenhorn[39] found that in a series of forty-eight patients with beriberi (defined as neuritis due to thiamine deficiency) twenty-four were chronic alcoholics, and four of these had cirrhosis of the liver.

Signs and Symptoms.—The individual who has "alcoholic" polyneuropathy almost always has a history of weeks or months of earlier symptoms of thiamine or vitamin B complex deficiency. These symptoms are of a vague and multiform nature and, as has been emphasized by Williams

and coworkers,[26] closely resemble the psychiatric condition designated neurasthenia; common complaints include anorexia, weight loss, constipation or diarrhea, generalized weakness, backache, palpitation, dyspnea, precordial distress, insomnia, irritability and headache. The onset of the neuropathy per se is usually insidious but may be sudden. The earliest symptoms generally comprise calf muscle tenderness and leg weakness; there may be no weakness noted when the patient begins walking, but after a variable distance marked weakness occurs and is relieved by rest. Burning sensations of the soles develop at about this point, and there is hyperesthesia of the involved areas. Weakness of dorsiflexion of the toes becomes objectively demonstrable. There follow diminution to loss of vibratory and position sense in the toes, delayed plantar hyperesthesia, and skin and muscle atrophy; still later there is complete anesthesia of the involved parts. All of these changes tend to start in the feet and spread gradually upward, sensory changes preceding motor; by the time the thigh muscles become weak there is usually anesthesia of the feet with toe and foot drop. Early in the disease the tendon reflexes become hyperactive,[40] later hypoactive and finally absent. Upper extremity involvement does not ordinarily occur until moderately severe changes are present in the legs; the sequence of events is entirely similar, with burning, hyperesthesia and weakness of the hands, followed by wrist drop, hypesthesia and anesthesia, with loss of tendon reflexes. Sphincter control is usually maintained even when the patient is bedridden from the disease. When the disease has reached its advanced stages there will frequently be evidence of central as well as peripheral nervous system involvement.

The characteristic involvement first and predominantly of the lower extremities, with bilateral symmetry of the lesions, occurs almost without exception. Conditioning factors may in rare instances alter this picture; Jolliffe,[33] in his comprehensive review of this subject in 1942, cites the case of a man crippled with hip joint disease and confined to a wheel-chair which he propelled with his arms; polyneuropathy occurred first and predominantly in his upper extremities.

Of our cases of peripheral polyneuropathy, three were in association with Wernicke's disease; two did not remain in the hospital long enough for adequate evaluation.

CASE REPORT

Case 8. A 68 year old female was admitted to the City Hospital with the chief complaint of fainting while at stool. She was known to consume large amounts of alcohol for at least a year, the exact quantity not being known, but estimated as two quarts of whiskey daily. Four months prior to admission, the patient developed extreme weakness of the legs and had gone to bed. She remained there until admission to the hospital, leaving bed only, with assistance, to go to the toilet. She claimed to have been unable to swallow solid food for four months, consuming only milk, buttermilk and alcoholic beverages. She had lost forty pounds in weight. She vomited frequently. There had been a progressive blindness of the right eye, which became completely amblyopic one year prior to hospitalization.

On physical examination the patient was well developed, obese, alert, cooperative but restless; there was no apparent distress. The right eye was glaucomatous, and was without sight. The liver was palpable 5 centimeters below the right costal margin. On neurological examination there was weakness and slight atrophy of the legs; position, touch and pain senses were intact; the knee and ankle tendon reflexes were absent bilaterally. Cranial nerves, excepting the findings in the right eye, were intact. Significant laboratory data included positive blood Kahn and Wassermann tests with negative spinal fluid serology.

Treatment consisted of a high vitamin diet, with supplemental thiamine chloride and ascorbic and multivitamin tablets and crude liver. In addition she received 7,500,000 units of penicillin for syphilis.

In two weeks the calf tenderness disappeared, her restlessness lessened and she could walk, though the legs were still weak. In one month she was discharged, able to walk unassisted. She was eating a full diet, was symptomless. Patellar reflexes had returned but ankle jerks were still absent. Sensation had never been significantly impaired.

OTHER CENTRAL NERVOUS SYSTEM DEGENERATIONS

Inasmuch as spinal cord changes are not an integral part of the syndromes of alcoholic encephalopathies nor of peripheral neuropathy but may occur in either, they will be discussed briefly at this point. The changes in the cord are pathologically similar to those seen elsewhere in the nervous system; patchy areas of demyelinization, with axis cylinder destruction occurring as a later manifestation.[41] The posterior columns are involved first; later lateral and anterior column involvement may occur, pyramidal and lateral sensory tract involvement being of frequent occurrence. Occasionally anterior horn cell involvement may occur. Clinically the picture of combined system disease or of tabes dorsalis may be simulated. Simular changes may have been found in beriberi[42] and have been produced experimentally in dogs with a thiamine deficient diet.[43] Bender[44] has reported five cases of alcoholic encephalopathy with autopsy findings of spinal cord degeneration.

CASE REPORT

Case 9. A 63 year old male was admitted to the City Hospital after having been found wandering aimlessly in the streets. An adequate history was not obtainable from the patient and there were no informants available; he stated that he drank wine, but the exact amount was not obtainable. The patient had no specific complaints.

Physical examination at the time of admission revealed a well developed, fairly well nourished man who was disoriented as to time and place, and was confused; recent memory was impaired. The skin was dry and thin; there was increased pigmentation of both forearms and a patchy hyperpigmentation of the legs. The lungs were hyperresonant and breath

sounds were faint; otherwise the general physical examination was not remarkable. Neurologically, no atrophy or muscle weakness was detected, but the gait was broad-based and unsteady. There was marked calf tenderness; vibratory sensation was impaired in the legs. Deep tendon reflexes were hyperactive in the arms; patellar reflexes were present, but the Achille's jerks were absent. Babinski and Chaddock signs were present bilaterally. Spinal fluid contained 82 mg. per cent total protein, 5 lymphocytes, negative serology and colloidal gold curve tests.

Treatment consisted of a high caloric diet, supplemented with thiamine chloride, niacin, multivitamin tablets and ascorbic acid. In one week the gait was no longer ataxic, muscle tenderness disappeared and the Babinski and Chaddock signs could not be obtained. Decreased sensibilities to cutaneous and proprioceptive stimulation persisted. The sensorium cleared up slowly. He left the hospital two weeks after admission free from subjective complaints.

These syndromes represent the commonly encountered neurologic disorders seen in chronic alcoholics. These entities do not necessarily exist in pure culture, and cases will be found which represent combinations of two or more of the syndromes. There are also instances of "alcoholic" encephalopathy which cannot be fitted into any of the described categories (see Bender and Schilder[45]; it seems not unlikely that further investigation will prove them to be examples of as yet unidentified deficiencies. Lastly, although only two cases have been reported in this country, mention should be made of Marchiafava's disease, a rare encephalopathy occurring in male alcoholics, all with one exception Italian, and characterized by progressive personality and mental deterioration plus varied neurologic abnormalities, the most constant of which is convulsive disorder. The disease has never been diagnosed during life; pathologically it presents a diagnostic picture of degeneration of the midzone of the corpus callosum, with intact superior and inferior layers.

THERAPY

Since all of the syndromes discussed, with the possible exception of the miscellaneous group just mentioned, are due to the vitamin deficiency, the treatment of the various disorders varies in emphasis but not in basic pattern. In all instances the patient should be given a high calorie, high vitamin diet as soon as he is able to eat it, and therapy should include large doses of all the known B vitamins as well as vitamins A and C, plus whole B complex in the form of brewer's yeast or crude liver. Wortis and Pfeffer,[46] for example, recommend as this basic vitamin therapy an oral polyvitamin supplement containing per daily dose vitamin A, 25,000 units, vitamin C, 150 mg., vitamin D, 1,000 units, thiamin, 5 mg. riboflavin, 5 mg., niacinamide, 150 mg., and folic acid, 5 mg. Recently there have been reports[34, 47] of relief of symptoms of peripheral neuropathy with vitamin B_{12}, and inclusion in the therapeutic regimen of this newest of the B substances would appear to be indicated; the optimal dosage has not yet been determined. Of course in the presence of vomiting or diarrhea the parenteral route of administration should be used.

The vitamins chiefly responsible by their deficiency for the syndrome encountered are given in much larger doses. On such a regimen there is usually rapid and often dramatic improvement of the clinical status of the patient. In peripheral neuropathy thiamine is given in doses of 20 to 100 mg. daily, orally or parenterally; subjective complaints in most mild or moderate cases disappear in several days. The objective changes disappear more slowly and sometimes in severe cases there are permanent residua, as loss of deep tendon reflexes. Other measures include bed rest during the early treatment period; the use of splints or plaster shells to prevent contractures during the period of marked paresis in severe cases; and massage and passive movement, as soon as tenderness is sufficiently diminished to allow their use. In Wernicke's disease the basic vitamin therapy and thiamine dosage are used, plus nicotinic acid, 500 to 1,000 mg. daily by mouth.[46] It should be emphasized that in Wernicke's disease immediate institution of vigorous therapy is of utmost importance; untreated or inadequately treated the disease carried the high mortality of 80 to 100 per cent, whereas Jolliffe's group[48] has reported fourteen consecutive recoveries in adequately treated cases. The response to therapy in Wernicke's disease follows a rather characteristic pattern (Jolliffe[4]). The ophthalmoplegia responds rapidly and specifically to thiamine therapy, the ataxia more slowly and uncertainly; the residual Korsakoff's syndrome frequently regresses but the part played by vitamin therapy is not certain. In nicotinic acid deficiency encephalopathy the basic vitamin regimen should be supplemented with nicotinic acid 500 to 1,000 mg. daily by mouth plus 100 to 200 mg. parenterally; under this therapy there is marked recovery within three to five days, whereas untreated the disease carries a mortality similar to that of Wernicke's disease, i.e. approaching 100 per cent.

The results of therapy in our cases corroborate these remarks. In the six cases of peripheral neuropathy (including the three associated with Wernicke's disease) there was rapid recovery except in the severe case with advanced paresis of all extremities, where recovery was slow over a three month period. The three cases of Wernicke's syndrome which were treated adequately underwent a rapid remission, within days, of all neurologic abnormalities except the gait disturbances, which improved more gradually; the residual Korsakoff psychosis showed no consistent response to vitamin therapy, one case recovering completely in two months, one incompletely in three weeks and one not at all in two months; in the peripheral neuropathy with Korsakoff's psychosis the mental symptoms cleared up several

weeks before the neurologic abnormalities. Our therapy, with some variation as to exact figures, has been essentially that outlined.

SUMMARY AND CONCLUSIONS

Nine cases are reported which demonstrated the neurologic sequelae of vitamin deficiencies associated with chronic alcoholism. In most instances a combination of syndromes were present. Six of the patients manifested pronounced degrees of peripheral neuropathy; five patients suffered from Wernicke's syndrome, of whom two died; four patients had Korsakoff's psychosis; one showed classical signs of acute nicotinic acid deficiency.

Recovery of the encephalopathies depended upon the correct estimation of the nature of the predominantly deficient vitamin; misdiagnosis is apt to be associated with a fatal issue. Response to adequate multivitamin administration generally gave gratifying degrees of recovery.

457 N. Kingshighway.

BIBLIOGRAPHY

1. Alexander, Leo: Wernicke's Disease, Am. J. Path. **16**: 61, 1940.
2. Yudkin, W. H.: Thiaminase, The Chastek-Paralysis Factor, Physiol. Rev. **29**:389-400 (October) 1949.
3. Wortis, H.; Bueding, E.; Stein, M. H., and Jolliffe, N.: Arch. Neurol. & Psychiat. **47**:215, 1942.
4. Jolliffe, N.; Wortis, H., and Stein, M. H.: Alcoholic Encephalopathy and Nutrition; Jellinek, E. M.: Alcohol Addiction and Chronic Alcoholism, New Haven, Yale University Press, 1942, pp. 241-262.
5. Ecker, A. D., and Wolman, H.: Is Nutritional Deficiency the Basis of Wernicke's Disease, J. A. M. A. **112**:1753, 1939.
6. Barrie, H. J.: Wernicke's Encephalopathy in Surgical Practice, Report of Three Cases, Lancet **2**:278, 1947.
7. Guerrero, R. M.: Wernicke's Syndrome Due to Vitamin Deficiency, Am. J. Dis. Child. **78**:88, 1949.
8. de Wardener, H. E., and Lennox, B.: Cerebral Beriberi (Wernicke's Encephalopathy), Review of 52 Cases in Singapore Prisoner of War Hospital, Lancet **1**:11, 1947.
9. Jolliffe, N.; Wortis, H., and Fein, H. D.: The Wernicke Syndrome, J. Nerv. & Ment. Dis. **93**:214, 1941.
10. Ibid.: Discussion by Riley, H. A.
11. Jolliffe, N.; Wortis, H., and Fein, H. D.: The Wernicke Syndrome, Arch. Neurol. & Psychiat. **46**:569, 1941.
12. Hess, L.: Polioencephalitis Hemorrhagic Superiores and the Vegetative Nervous System, J. Nerv. & Ment. Dis. **108**:109, 1948.
13. Grinker, R. R.: Neurology, Springfield, Chas. C Thomas, 1943.
14. Observations of the Role of Vitamin B in the Etiology and Treatment of Korsakoff Psychosis, J. Nerv. & Ment. Dis. **90**:569, 1939.
15. Bowman, K. M.; Jellinek, E. M.: Alcoholic Mental Disorders; Jellinek, E. M.: Alcohol Addiction and Chronic Alcoholism, New Haven, Yale University Press, 1942.
16. Friedman, A. P., and Brenner, C.: Amnestic-Confabulatory Syndrome (Korsakoff Psychoses) Following Head Injury, Am. J. Psychol, **102**:61 (July) 1945.
17. Rosenbaum, M.; Merritt, H. H.: Korsakoff's Syndrome: Clinical Study of the Alcoholic Form with Special Respect to Prognosis, Arch. Neurol. & Psychiat. **41**:978, 1939.
18. Bender, L., and Schilder, P.: Encephalopathica Alcoholia, Arch. Neurol. Psychiat. **29**:990, 1933.
19. Cleckley, H. M.; Sydenstricker, V. P., and Gesslin, L. E.: Nicotinic Acid in the Treatment of Atypical Psychomotor State Associated with Malnutrition, J. A. M. A. **112**:2107, 1939.
20. Jolliffe, N.; Bowman, K. M.; Rosenblum, L. A., and Fein, H. D.: Nicotinic Acid Deficiency Encephalopathy, J. A. M. A. **114**:407, 1940.
21. Council on Foods and Nutrition: Vitamin Deficiencies: Stigmas, Symptomatology and Therapy, J. A. M. A. **131**:666, 1946.
22. Lie, J., and Sure, B.: Avitaminosis: XIX Nerve Degeneration in Albino Rat as Studied by the Freezing-Drying Method and Polarized Light With Deficiency of Vitamin A or of Vitamin B, Arch. Path. **24**:430, 1937.
23. Prichets, C. O.; Salmon, W. D., and Schrader, G. A.: Histopathology of the Peripheral Nerve in Acute and Chronic Vitamin B Deficiency in the Rat, Am. J. Path. **15**:251, 1939.
24. Gilden, M. C.; Castle, W. B.; Gilden, E. F., and Cobb, S.: Neuropathology of Experimental Vitamin Deficiency: A Report of Four Series of Dogs Maintained on Diets Deficient in the B Vitamins, Am. J. Path. **11**:669, 1935.
25. Jolliffe, N.; Goodhart, R.; Gennis, J., and Cline, J. K.: The Experimental Production of Vitamin B Deficiency in Normal Subjects, Am. J. M. Sc. **198**:198, 1939.
26. Williams, R. D.; Mason, H. L.; Wilder, R. M., and Smith, B. F.: Observations on Induced Thiamine (Vitamin B) Deficiency, Arch. Int. Med. **66**:785, 1940.
27. Jolliffe, N.; Colbert, C. N., and Joffe, D. M.: Observations on the Etiological Relationships of Vitamin B (B_1) to Polyneuritis in the Alcohol Addict, Am. J. M. Sc. **191**:515, 1936.
28. Jolliffe, N., and Colbert, C. N.: The Etiology of Polyneuritis in the Addict, J. A. M. A. **107**:642, 1936.
29. Goodhart, R., and Jolliffe, N.: The Effects of Vitamin B (B_1) Therapy on the Polyneuritis of Alcohol Addicts, J. A. M. A. **110**:414, 1938.
30. Strauss, M. B.: The Etiology of "Alcoholic" Polyneuritis, Am. J. M. Sc. **189**:378, 1935.
31. Pyruvic Acid in Blood and Cerebrospinal Fluid, Proc. Soc. Exper. Biol. & Med. **44**:245, 1940.
32. Elsom, K. D.: The Vitamin B Complex; Wohl, M. G., and Willard, J. H.: A Guide to Practical Nutrition, Phil. County M. Soc. 1943.
33. Jolliffe, N.: Vitamin Deficiencies in Chronic Alcoholism; Jellinek, E. M.: Alcohol Addiction and Chronic Alcoholism, New Haven, Yale University Press, 1942, pp. 173-240.
34. Bean, W. B.; Franklin, M., and Sahs, A. L.: An Effect of Vitamin B_{12} on Pain in Nutritional Neuropathy, Am. J. M. Sc. **220**:431, 1950.
35. Aring, C. E.; Bean, W. B.; Roseman, E.; Rosebaum, M., and Spies, T. D.: The Peripheral Nerves in Cases of Nutritional Deficiency, Arch. Neurol. & Psychiat. **45**:772, 1941.
36. Ellermann, M.: Social and Clinical Features of Chronic Alcoholism, J. Nerv. & Ment. Dis. **107**:556, 1948.
37. Jolliffe, N., and Frank, P.: Beriberi in Alcohol Addicts, J. A. M. A. **111**:380, 1938.
38. Relation Between Multiple Peripheral Neuropathy and Cirrhosis of the Liver, Arch. Int. Med. **66**:161, 1940.
39. Blankehorn, M. A.: Deficiency Diseases in the Cincinnati General Hospital. A Ten Year Study, J. A. M. A. **140**:1315, 1949.
40. Jolliffe, N., and Goodhart, R. S.: Nutritional Polyneuropathy, Med. Cen. Nerv. **32**:727, 1948.
41. Vitamin Deficiency in Neuropsychiatric Disease, Am. Pract. **1**:353, 1947.
42. Vedder, E. B.: The Pathology of Beriberi, J. A. M. A. **110**:893, 1938.
43. Gildea, E. F.; Wattwinkel, E. E., and Castle, W. B.: Experimental Combined System Diseases, New England J. Med. **202**:523, 1930.
44. Bender, L.: Myelopathia Alcoholica Associated with Encephalopathia Alcoholica, Arch. Neurol. & Psychiat. **31**: 310, 1934.
45. Bender, L., and Schilder, P.: Encephalopathia Alcoholica, Arch. Neurol. Psychiat. **29**:990, 1933.
46. Wortis, S. B., and Pfeffer, A. Z.: The Management of Alcoholism, Vet. Adm. Tech. Bull. **4**:1-20.
47. Menoff, P.: New Treatment for Polyneuritis, African M. J. **24**:715, 1950.
48. Wortis, H.; Bueding, E.; Stein, M. H., and Jolliffe, N.: Pyruvic Acid Studies in the Wernicke Syndrome, Arch. Neurol. Psychiat. **47**:215, 1942.

The Uninvited

"Why don't the doctors once in a while invite us to their meetings when we're home? Most of the time we'd be willing to talk to them about Washington and what we're doing, but I'm thinking more of just meeting them, saying hello and answering questions."—F. E. Wilson, M.D., quoting a Senator "friend of the A.M.A.'s" in *Washington Letter.*

High Tribute

. . . his obituary has been chronicled in detail . . . this is the essence of our memory of the Doctor:

He spoke his mind.
He was not afraid.
His opinions right or wrong were definite.
His barbecues were done to a turn.
His babies were damn well cared for.
His fish were big.—In Memoriam—J. H. Cochran, M.D., *Cape Girardeau County Medical Society Bulletin.*

Postgraduate Review

HYPERTHYROIDISM

PRESENT CONCEPTS IN TREATMENT

ARNOLD S. JACKSON, M.D.
MADISON, WIS.

To properly evaluate present concepts in the treatment of hyperthyroidism, it is essential to have a clear understanding of the classification of toxic goiter. To consider diffuse hyperplastic goiter and toxic nodular goiter as merely variations of the same disease is contrary to the conception which will be presented. Not only do these two forms of toxic goiter differ clinically and pathologically, but their response to treatment likewise differs. These conclusions are presented from a study of approximately 10,000 cases of goiter, 20 per cent of which were toxic.

Hyperthyroidism to be properly understood and treated must be divided into two distinct clinical entities, namely: (1) toxic, diffuse or hyperplastic goiter (variously termed thyrotoxic, exophthalmic, Grave's and Basedow's disease) and (2) toxic nodular goiter (also called multiple toxic adenoma and adenoma with hyperthyroidism).

DIFFERENTIAL DIAGNOSIS

Symptoms of Toxic Diffuse Goiter.—The onset is more rapid, usually occurring in from weeks to months. The condition progresses in a series of waves, at the crest of which a crisis may occur, with fever, gastrointestinal disturbance, extreme nervousness and delirium. The average age of onset is 33. The appetite may be ravenous at onset; later there may be anorexia or nausea. In the presence of a good appetite, weight loss may be severe. This condition is simulated only by diabetes.

Signs.—Diffuse symmetrical enlargement of the gland, which may be scarcely palpable or which may be markedly enlarged, may occur. After three months, thrill and bruit and also stare or exophthalmos may be present in about 50 per cent of the cases. The blood pressure in a typical patient 40 years old may be 140 systolic and 70 diastolic. Often the diastolic pressure may fall much lower and in this respect is simulated only by aortic insufficiency. Tremor, increased sweating, and quadriceps loss are present in both types. The basal metabolic rate averages plus 55 per cent. The condition responds to iodine unless the patient has become iodine-fast. The pathologic examination shows, grossly, a fleshy, meaty gland; microscopically, it shows hyperplasia and hypertrophy of the epithelium with papillary infoldings.

Symptoms of Toxic, Nodular Goiter.—The onset is gradual and insidious (months to years). The course is steady and progressive; crises do not occur. There are no gastrointestinal upsets, fever and delirium. The average age at onset is 48. The appetite is never ravenous, and weight loss is gradual.

Signs.—The gland is assymmetrically and irregularly enlarged. If it is intrathoracic, it may be scarcely visible or palpable. Thrill, bruit and exophthalmos are never present. The blood pressure is characterized by a high systolic and a correspondingly high diastolic pressure; thus, the blood pressure in a typical patient of 40 may be 170 systolic and 100 diastolic. Cardiac damage is apt to be permanent and more severe than in toxic diffuse goiter; fibrillation and decompensation are common. The basal metabolic rate averages plus 35 per cent, is seldom above plus 60 per cent, and is no criterion of the risk of operation. Only 38 per cent show slight benefit from treatment with iodine; 62 per cent show no response or are made worse. The pathologic examination shows, grossly, multiple, irregular nodules and cysts which may be degenerating, hemorrhagic, fibrous and calcareous; microscopically, it shows absence of typical hyperplasia.

It is apparent that the two types of hyperthyroidism as pointed out by Plummer in 1913 are fundamentally different. The clinical history, the physical signs, the pathologic picture and the response to iodine all differ.

It is necessary to have proper conception of these fundamental differences before considering the matter of therapy.

TREATMENT

The treatment of toxic diffuse or hyperplastic goiter may be medical or surgical. The medical treatment may be by (a) antithyroid drugs and (b) radioactive iodine.

The use of antithyroid drugs such as propylthiouracil or tapazole may result in a remission but seldom effects a cure. For the last three years I have abandoned their use in the treatment of adult hyperthyroidism. Many cases treated either by myself or others have shown complete regression of symptoms with a basal metabolic rate approximating normal only to slowly relapse three to six months after the drug is stopped. These patients maintain a normal weight and pulse rate for several months, but the metabolic rate gradually begins to climb, and soon there is a recurrence of all the symptoms of hyperthyroidism. In the meantime the gland has considerably enlarged and the problems of the surgeon are increased. In my opinion, therefore, the use of these drugs in this type of hyperthyroidism is no longer warranted unless the case is extremely advanced and toxic.

For the last five years I have been studying a

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.
From the Frieda Meyers Nishan Foundation for the Study of Goiter of the Jackson Clinic, Madison, Wis.

group of twelve cases of hyperplastic goiter in children to see whether or not a cure might be obtained without surgery. Two of this series are cured but only after treatment over a period of three years. The others all showed marked improvement and were able to carry on their school

Fig. 1. Patient with exophthalmic goiter with progressive exophthalmos after four doses of radioactive iodine. Basal metabolic rate, plus 44; pulse rate, 89; weight loss, 33 pounds.

work but have, in most instances, relapsed after a period of three to six months' remission. Time is not an important factor nor is it an economic problem with these children, so this study has been made in the hope of curing them without resort to surgery.

Lugol's Solution.—In 1927 I called attention to the danger of the prolonged use of iodine in toxic diffuse goiter and suggested the term "iodine-fast" hyperthyroidism for the resulting condition. Fortunately, this condition is seldom seen today, but, if encountered, the iodine may be safely stopped and antithyroid drugs safely administered for a rest period of from four to six weeks and then the patient returned to iodine for ten days prior to surgery.

Radioactive Iodine.—After seven years physicians are still attempting to evaluate the merits of treatment with radioactive iodine. Some authorities have claimed a high percentage of satisfactory results; others have been less enthusiastic and have frankly admitted a definite number of failures and relapses. It is a fact that at the largest thyroid clinics, such as Mayo and Lahey, where all methods are available, thyroidectomy is still the method of choice. Several cases that have been treated by radioactive iodine have come under my care. These patients had apparently received adequate treatment with this agent for from six to twelve months. In every instance the disease had been alleviated, but all were running metabolic rates three or four times normal, all were underweight and definitely toxic. All have been restored to their normal state of health by surgery.

These cases reminded me of those one used to see twenty-five years ago that had been treated with x-ray therapy. All of them were helped but most of them continued to run a low grade hyperthyroidism that often resulted in permanent cardiovascular damage after long periods of therapy.

Fig. 2. Same patient three months following thyroidectomy. Weight gain was 30 pounds and basal metabolic rate was normal.

Surgery was required to effect a cure in most instances.

Nevertheless, radioactive iodine has many advocates and it has been definitely proved to be the most successful nonsurgical treatment of this disease. As yet, few serious consequences have been

reported from its use, and no instance of carcinoma as a consequence is on record. Many who advocate its use feel that it should be reserved for the poor surgical risk case such as patients with severe cardiac damage, those who have sustained nerve injury by previous surgery or those who have diabetes or other complications. At the annual meeting of the American Goiter Association this subject received a great deal of discussion, and at this year's meeting, at which one of your own distinguished members, Dr. Claude Hunt, will be the presiding officer, this subject is sure to be warmly debated.

Surgical treatment.—It is my belief that the majority who have long been interested in the field of thyroid disease think that at the present time this form of hyperthyroidism can be most effectively and quickly dealt with by operation. If the patient is properly prepared and operated upon by a competent thyroid surgeon, the risk of operation or of complications is almost nil. Proper preoperative preparation should mean not the administration of Lugol's solution, 10 drops three times a day for ten to fourteen days, but also a proper psychologic approach. The patient must have confidence not only in his surgeon but the self-assurance that he will be ambulatory within a few hours after his operation. My own preference is for superficial nerve block anesthesia, and I consider the electrosurgical knife a valuable adjunct in performing an adequate thyroidectomy. Preoperatively, patients receive nembutal grains 1½, pantopon grains ⅓, and scopolamine grains 1/150, if the patient is under 50 years of age, otherwise grains 1/200. Postoperatively, Lugol's solution from 100 to 200 drops are given in twenty-four hours, the dosage depending upon the severity of the disease. This amount is reduced to 10 drops per hour the second day, and from that time on the patient is kept on this dose until he regains the desired weight. It is essential that he gain this weight as soon after operation as possible. Failure to gain weight means that sufficient gland was not removed or that the patient is failing to cooperate. This usually means that he has returned to the same environment or that he has returned to the use of stimulant (nicotine and caffeine) drugs, that should be absolutely forbidden to these patients. Metabolic studies should be made until a normal rate is maintained several months after iodine is stopped. No instance of either a preoperative or postoperative thyroid crisis has been observed in our clinic in the last fifteen years.

Toxic nodular goiter.—The cure of this condition demands surgical treatment. Radioactive iodine may control hyperthyroidism, but only operation will remove the goiter.

Drugs.—Iodine has no place in the preoperative and postoperative treatment of these cases, except after preoperative preparation with the antithyriod drugs when its use will lessen the tendency to bleeding when thyroidectomy is performed.

The antithyroid drugs have proved a valuable adjunct in the surgical treatment of this type of hyperthyroidism. I use them only in the more severe or complicated cases in which the disease

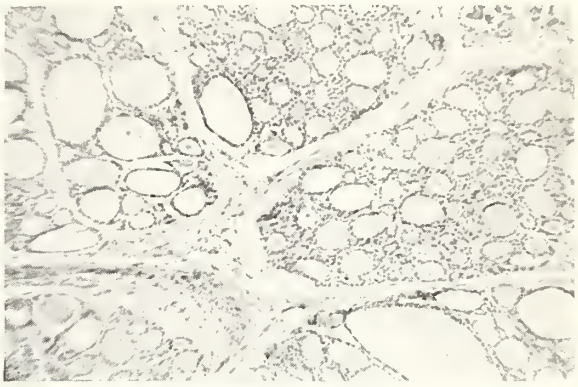


Fig. 3. Microphotograph of exophthalmic goiter previously treated with radioactive iodine.

has been prolonged. It does not seem necessary to give it until the metabolic rate is normal, but there is no objection to continuing its use for several months if there is any doubt about the patient's ability to undergo thyroidectomy.

In our clinic, no postoperative medication is given these patients, but steam inhalations are desirable to combat tracheitis. The end result of surgical treatment is less satisfactory in patients with toxic nodular goiter because many of them have sustained permanent damage to their cardiovascular systems. To improve these results, it will be necessary to impress not only the laity but the profession in general with the desirable consequences resulting from the surgical removal of all adenomatous goiters. Not only do 50 per cent in time become toxic, but at least 5 per cent become malignant and as many more become substernal or even intrathoracic.

In conclusion, it may be said that there should be a definite understanding as to the type of toxic goiter before any method of treatment is advocated. There is no unanimity of opinion as regards the treatment of toxic diffuse goiter, but the antithyroid drugs are not curative, the prolonged use of iodine is dangerous, and the use of radioactive iodine remains a controversial subject. Thyroidectomy remains the method of choice in most thyroid clinics. The antithyriod drugs are valuable in the preoperative preparation of patients with severe or advanced toxic nodular goiter, and surgical removal is the method of treatment.

SUMMARY

A study is given of present concepts in the treatment of hyperthyroidism.

A clear conception of the two types of hyper-

thyroidism is essential before considering methods of treatment.

A summary of the important differential diagnostic signs and symptoms is presented based on a study of approximately 10,000 cases of goiter.

The indications and contraindications for the use of iodine, antithyroid drugs, I^{131} and surgical treatment are presented.

16 S. Henry St.

The Fulminations of a Phenobarbital Fiend
or
The Horrid Harpings of Heart-happy Hardin
in the Hospital

I'm supposed to be quiet
And live on a diet—
Relax and be patient and calm—
Be cheerful and gentle,
Keep my appetites mental
And aspire to the mood of a Psalm.

But I've had enough
Of this sort of guff,
And I'm kicking over the traces;
I'm not going to be good
Or go without food,
And I mean to make horrible faces.

I intend to go places,
Bet dough on the races,
Yell "Fire!" and start a real panic.
I'll go out with the boys,
I'll do nothing that cloys,
Cultivate the phase they call "manic."

I'll be at the clam-bake;
I'll devour a thick steak
And use salt, or at least I will try it.
I'll order the bacon
For which I've been achin'
And leer in my beer while they fry it.

I'll eat too much candy;
I'll drink too much brandy;
I'm going to become an old soak.
I'll get gloriously stewed:
I'll do things that are rude;
I may even buy Camels, and smoke.

I am going to say "Nuts!"
And use the word "guts,"
And I think I will climb a tall steeple:
I'll ring the big bell;
I'll shout "Go to Hell!"
And startle conservative people.

I mean to pull hair,
Let my temper just flare,
And see somebody else be the martyr.
I am going to be bad—
Behave like a cad—
(I am planning to snap some girl's garter!)

And what's actually worse,
I shall disobey Nurse
And do it without inhibition,
While my ultimate mission
Is to kill my physician
And set off some nuclear fission.

ATLANTA, OCT. 26·27·28·29

For the fourth time in its history, the Southern Medical Association will meet in Atlanta, Georgia.

Physicians of the South are urged to mark the dates of this meeting on their calendars and make every effort to attend this outstanding meeting of the year.

In addition to the forty-seven half-day section meetings covering every aspect of medical practice, there will be a general session, conjoint meetings, many social activities, and fraternal and alumni gatherings—a **complete general medical meeting,** with all scientific activities under one roof, the Atlanta Municipal Auditorium.

Hotel accommodations for this meeting may be secured by writing: Housing Bureau, Southern Medical Association, 801 Rhodes-Haverty Building, Atlanta, Georgia, giving hotel preference, type of accommodations desired, date and hour of arrival and departure, name and address.

While membership in the Association is not a requirement for attendance at the annual meeting, it affords many advantages, among which is the *Southern Medical Journal,* one of the leading medical publications of today. Membership dues including the Journal are only $10.00 per year. There is no registration fee at the annual meeting.

Members of state and county medical societies eligible for membership are invited to become members of the Association and attend the Atlanta Meeting, which promises to be one of the most successful meetings ever held by the Southern Medical Association.

SOUTHERN MEDICAL ASSOCIATION
Empire Building
Birmingham, Alabama

Special Article

PROGRESSIVE MEDICAL EDUCATION

ROSCOE L. PULLEN, M. D.
COLUMBIA

By the expansion of its two year program to the four year curriculum leading to the degree of Doctor of Medicine, the University of Missouri has embarked upon an unparalleled opportunity to serve the people of Missouri in the advancement of all types of health education. Problems there will be, and always have been, but medical education has never held greater promise than that which is available today. Medical education of all forms, whether undergraduate, graduate, postgraduate or the training of ancillary or paramedical health personnel, is in a state of flux and it is fitting that some of the current concepts of health education be reviewed briefly, especially as they relate to undergraduate medical education.

Though recognized as the paramount function of the medical school, the purposes, methods and philosophy of undergraduate medical education are being subjected today to painstaking review and analysis. The reasons for such intense interest in undergraduate medical education are to be found in the changing conditions which the physician confronts in the practice of medicine: the increasing longevity of the population with greater emphasis on cardiovascular disease, cancer, arteriosclerosis and other disorders associated with the aging process; the growing urbanization of society and the problems which this movement engenders; the geographic mobility of the population which has created shortages of physicians and health facilities in some areas and abundance in others; the growth of the number of incurable and chronically ill which has brought into sharp relief the importance of preventive medicine, public health and rehabilitation with the concept that everyone should be as useful socially and economically as possible; the rapid increase of prepayment or voluntary insurance programs, nearly all of which have developed in the last decade; technologic progress in agriculture and in industry which influence the practice of medicine; the development of labor unions and other organizations which have a bearing on private practice; alterations in the family as a unit in the American way of life; improved transportation and methods of communication; military and governmental demands; the rising costs of medical care and the shortages of personnel and facilities for hospitalization of both the acutely ill and the chronically ill; the inability of present medical schools to produce physicians at a rate that will keep pace with the rapidly expanding population and to replace physicians that have retired or become inactive, especially in the rural areas; the relations betweeen specialism and general practice, and other factors too numerous to mention.

Simultaneous with the social and economic changes outlined have been far reaching advances in all forms of scientific endeavor. Medicine is not an isolated science; it calls on and utilizes the contributions from every scientific field that will improve the health and welfare of the people. The brilliant advances in medical knowledge have posed challenges of staggering proportions to medical education. Consider, for instance, the changes in the classification of disease (subsequently the teaching of medicine) if Selye's concept of the diseases of adaptation should find wide acceptance. Imagine the alterations in current medical teaching that would result if a chemotherapeutic substance were proved effective for neoplastic processes; or an enzyme that would accelerate manyfold the restoration of injured tissue; or the discovery of a cheap, nontoxic, nonhabit forming drug that would alleviate the diseased mind. The body of medical knowledge that should be taught to the student today is so great as to defy successful teaching, not to mention comprehension by the student. Furthermore, the tempo of progress is so rapid that certain teachings of today may become obsolete by the time the student is ready for practice. Faced with this dilemma, medical faculties advocate the teaching of the principles of medicine and recognize that the four year curriculum is insufficient preparation for medical practice.

There are other problems of the undergraduate medical curriculum which are receiving attention at the present time. Medical practice is, for the most part, an individual affair, the relation between one doctor and one patient, one at a time. As a consequence, medical teaching takes on the concept of individuality and the better medical faculties are those which adhere to a low ratio of students per teacher. Yet this concept, desirable though it is, tends to restrict the number of students in each class, elevates the costs of medical education and augments the shortage of skilled teachers within the medical schools.

The individual concept of medical teaching, stressed so effectively in the past, is now threatened by scientific progress in many fields. I cite a few examples to emphasize the validity of this statement. The management of neoplastic diseases, in particular, demands statistical knowledge of the probabilities, morbidity and mortality of all

Dean and Professor of Medicine, University of Missouri School of Medicine.

procedures utilized in the therapeutic approach; biostatistics, then, takes on new significance as a course offering in undergraduate medical education. Mass screening technics, such as fluororoentgenography of the chest, have brought to light many incipient or asymptomatic processes, the effective management of which pose fascinating problems in medical practice. Periodic health examinations for insurance, for industry or for other causes are additional examples of the mass or group approach to disease. The advent of generalized skills such as chemotherapy, endocrine therapy and the like, have expanded greatly the therapeutic armamentarium of the general physician and have broadened the scope of his practice. Similarly, developments in laboratory medicine have not only extended the observations of disease which the physician may record, but have made possible the successful employment of nonmedical personnel in medical practice, thereby enlarging the physician's usefulness to his practice. The effectiveness of other screening technics, such as the Cornell Medical Index for history taking, batteries of laboratory tests for diverse conditions and the like, are in general limited to specific groups of patients or to certain disorders. Finally, it seems trite to emphasize the varying incidence of diseases within a community as a consequence of factors promoting better health.

These and other developments in medical science are profoundly affecting medical education at the present time. Experiments in all aspects of the medical school curriculum are in constant progress, each designed to improve the effectiveness of teaching methods or to fill a gap in preparation for practice. On certain principles there is complete agreement: The undergraduate medical curriculum does not constitute adequate preparation for practice; the type and duration of postgraduate training should be tailored as closely as possible to the needs of the individual physician; there is need for continuing research and experimentation in all phases of medical education; the student should be indoctrinated early in the necessity of continuing study for each and every day that he may practice medicine; the practice of medicine (and thereby medical education) is subject to influences other than scientific progress; finally, the physician trained in the observations of disease by the principles of bedside diagnosis is admirably equipped for whatever changes that may occur in medical science.

New Definition

A specialist is a doctor who has his patients trained to get sick only during his office hours. The poor general practitioner is likely to be called off the golf course at any time.—J. J. Lightbody, M.D., *Detroit Medical News.*

Tuition Due Again . . .

. . . Now . . . our schools are beginning to get into trouble. Inflation has reduced the purchasing power of endowment dividends . . . enrollments in the nonmedical departments are falling off and the parent universities are feeling a financial pinch and are limiting funds allocated to the medical departments. . . . The "planners" say government subsidy is the only answer. . . . Which is bureaucratic semantics for "We will now take over the running of the schools.". . . "Not so," says the A.M.A. The answer is still American free enterprise and freedom of education from government interference. . . . Missouri was 34th among the states in dollar contributions (to American Medical Education Foundation). . . . This is less than a satisfactory record. . . . If you did not contribute when you received the letter in June, do it now. . . .* You can earmark your check for your own school if you wish.—G. Wilse Robinson, Jr., M.D., *Jackson County Medical Society Bulletin.*

* To C. Edgar Virden, M.D., Professional Bldg., Kansas City 6, Mo.

Practical Test for Occult Blood

. . . it is essential that the procedure of the test not require elaborate preparation of the patient and that the reagents employed show as little deterioration and variation as possible . . . under conditions prevailing in the physician's office . . . rather than by . . . a research laboratory.

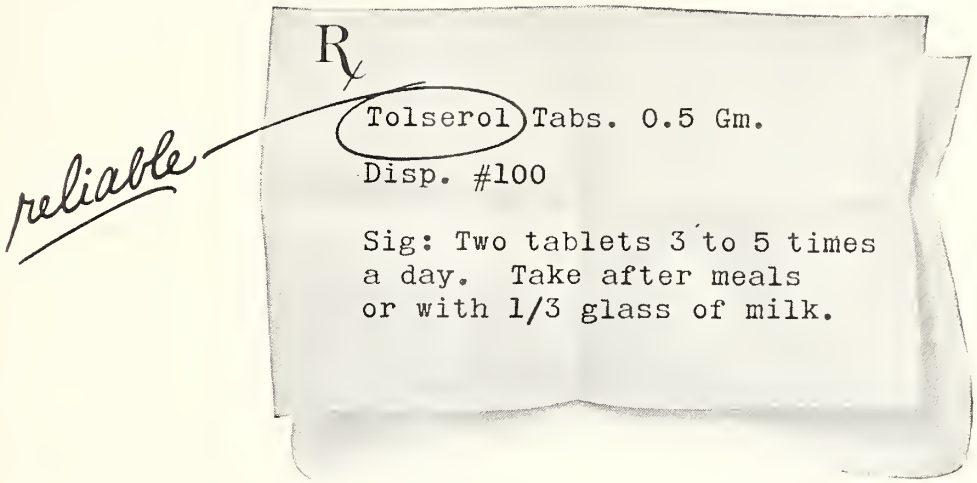
. . . it appears that the Gregersen modification of the benzidine test, at the 2 plus level of sensitivity . . . is a far more adequate screening test than is the guaiac procedure for the purpose of detecting occult blood on the feces . . . the guaiac test will regularly fail to detect 25 ml. of blood loss into the upper gastrointestinal tract, and will often fail to indicate losses of 50 ml. Even daily losses of 30 ml. of blood may not be detected by the guaiac test performed on every stool sample for five to six days.—Albert I. Mendeloff, M.D., St. Louis, "Selection of a Screening Procedure for Detecting Occult Blood in Feces," *J.A.M.A.*

Complications of Testosterone Therapy in Females:

Beneficial effects of testosterone in the female are well known; anabolic effects, stimulation of libido, and counteraction of estrogens, are well-established indications. Masculinization, as evidenced by hirsutism, acne, or voice changes, may be irreversible. Furthermore, the dosage necessary to produce these adverse signs is unpredictable. Dr. W. W. Robinson presents 7 case reports of masculinization with subsequent treatment with Methylandrostenediol. The drug exerts the anabolic action, but without significant androgenic effect. Administration of the drug may be orally or parenterally, in dosages up to 150 mg a week. *Western J. Surg., Obst. & Gynec.*, February, 1953.

This is an interesting and helpful paper. One point of warning which the author did not stress is the fact that the use of testosterone carries with it some medicolegal aspects. This, of course, refers to the patient who develops irreversible masculinization. A drug with less androgenic activity would be of great significance. With any such drug, however, strict supervision of the patient is a must. D. B. Elrod, M.D., Obstetrics-Gynecology, *Cape Girardeau.*

RAPID ABSORPTION—*MAXIMUM THERAPEUTIC EFFECT*



The clinical effectiveness of different brands of mephenesin tablets depends on their rate of absorption. A mephenesin tablet that disintegrates slowly is absorbed slowly. The resulting low blood levels may never produce a maximum therapeutic effect. Results with such a tablet are usually poor.

Tolserol Tablets are a result of extensive study and are formulated to disintegrate rapidly for fast absorption, thus maintaining optimum blood levels.

Tolserol

(*Squibb Mephenesin*)

Complete information on the use of Tolserol in muscle spasm of rheumatic disorders, in neurologic disorders and in acute alcoholism is available from the Professional Service Department, Squibb, 745 Fifth Avenue, New York 22, N. Y.

SQUIBB

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

Good Luck, School of Medicine

Now that the whooping, the hollering, the feuding, the fighting are over, and it is an established fact that four years of medicine will be offered at Missouri University, we would like publicly to wish Missouri University Medical School the best of everything. No citizen of our state should hold back now, we should all do everything in our power to make it succeed!

We believe the record will show that such a venture was attempted before and fell flat on its face; perhaps we are misinformed. But this time the signs and symptoms are favorable. And despite all the wrangling and acrimony which has clouded this situation for years, we predict and hope they do make a success of it this time.

As to whether the best site was chosen is beside the point now. Many of us feel the second best location was picked. However, Missouri has needed a third medical school for so long that the present selection will satisfy the primary obligation of our State University: To offer facilities for teaching medicine.

Perhaps the University will emphasize the importance of turning out well trained young practitioners of medicine, without undue weight being placed on turning out teachers and researchers, although these phases should not be completely ignored. It's no great secret that one of our Universities points its students toward these roles, while the other has a bit less "ivory tower" approach in the teaching of its students. Now, if the University of Missouri will just content itself with turning out good, solid citizens interested and trained in the care of sick folks, we will have the complete medical educational works, right here in Missouri.

It makes no difference what our previous convictions were concerning the location of the medical school. As physicians, as Missourians, it is now clearly our duty to back the authorities in any way we can, each and all of us, in making our State University Medical School a real success.

VINCENT T. WILLIAMS, M.D.

(Please see Dr. Roscoe Pullen's Special Article on page 783.)

The Farm Bureau Checks Up

The medical profession has had so many kicks in the pants recently that it is refreshing to learn, from an impartial source, that Missouri medicos aren't too bad, after all.

Our good friend and Executive Secretary, Tom O'Brien, who sees all and knows all, found a gem in the *New York State Journal of Medicine* for July 15 which he passed on to us. An anonymous editorial writer took apart the boys in New York state who have been abusing Blue Cross-Blue Shield. Some of them, apparently, have been tacking their regular fees on top of the Blue Shield allowance. The writer pleads for more careful explanation to the patient, by doctors and their secretaries, for the not too generally understood function of the Blue Shield allowance. He deplores the apathy of those "physicians who refuse to take an interest in Blue Shield, neglecting to assume any responsibility for the good will of the public and forgetting that their lack of cooperation weakens Blue Shield and strengthens rival systems of insurance which are not subject to physician guidance."

On the other side of the Mississippi, the Rural Health Service of the Missouri Farm Bureau Federation, Chester G. Starr, Director, has completed a survey of Blue Cross-Blue Shield member experience with inquiries of 1,682 members. This can best be briefed by an actual quote from the body of the report. "We are particularly interested in the tabulation concerning whether physicians hike fees when a patient has insurance. . . . Apparently physicians are not hiking fees when the patient has insurance, as commonly rumored."

Thanks, Tom!

JEROME I. SIMON, M.D.

More Balderdash

When a doctor primarily in private practice offers to help out in the care of indigents sponsored by a governmental or private agency, he finds himself often in a difficult position. When a call comes relative to an indigent a stopwatch is held on his response. If he does not go at once, merry hades is raised and the newspapers have a field day of items of reader interest.

The fault is not all on the indigents' side—the agencies and the public are much to blame for the attitude. They in turn make the indigent and his family and friends at times almost intolerable because of assumed importance and demands.

As a matter of fact, a doctor is just as beholden to his private patients as he is to any indigents whom he has consented to care for. If a call comes relative to an indigent who has a splinter under his fingernail and also one comes from a private patient who has a heart attack, pneumonia or some other serious and imperative medical or surgical condition—it certainly follows ethical lines to take care of the most serious condition first. If the role of the indigent and private patient were reversed, the same consideration would hold; i.e., the more serious case should be treated first.

But not in all instances; a call from an indigent calls for either immediate response or disagreeable one sided notoriety. If the case worker or editor were severely stricken, he would certainly favor being seen before the fingernail case. Our public and newspapers should wake up. The situation as it stands is all BALDERDASH.

F. T. H'DOUBLER, M.D.

Newer Treatments for Tuberculosis

The barrage of scientific and pseudo-scientific reports on the treatment of pulmonary tuberculosis continues unabated. Obviously, new methods cannot be as perfect as they are represented, nor can older methods be so out-dated as to be ready for discard.

Harvard physicians W. E. Patton and Theodore Badger have presented a sane and sober picture of the disease in the light of present knowledge:

"The chronic relapsing nature of pulmonary tuberculosis makes it difficult to evaluate . . . treatment is not dramatic, healing slow and uncertain . . . the simplest treatment . . . is the ideal . . . definitive treatment is necessary only in active or recently discovered tuberculosis . . . bed rest is the cornerstone of . . . treatment.

". . . Chemotherapy is effective chiefly in acute exudative lesions but there are side effects and resistant organisms . . . best results are obtained by the use of . . . Streptomycin . . . and PAS . . . Isonicotinic acid . . . widely hailed . . . but no spectacular results have been noted . . . toxic manifestations have not been adequately studied.

"In the matter of collapse therapy the popularity of pneumothorax has declined in favor of pneumoperitoneum, but is still used in cavitation of the upper lobes. Thoracoplasty is reserved for patients with disease that has failed to respond to more conservative measures. Pneumonectomy, lobectomy and segmental resection may prove to be of great value and definite indications have been set up for its use. It may . . . be the means of ridding the lung of tuberculosis completely but so far such ideal results have not been reported."

In tuberculosis various forms of treatment have gone through successive periods of enthusiasm and censure before being assigned their proper place in the therapeutic armamentarium. We must not discard well established methods of treatment and must await long observation of the newer methods of therapy before finally evaluating them.

ALLEN I. HERMAN, M.D.

Your Patients Hear and See

In the St. Louis area:

KSD-TV, Channel 5, Sunday, 9:00 p.m., "The Doctor."

KXLW, 1320, every Sunday, 12:15 p.m., "Panorama of Research."

KFUO, 850, every Saturday, 3:45 p.m., "Main Street Medicine."

In the Springfield area:

KGBX, 1260, every Saturday, 11:15 a.m., "The Living Proof."

In the Kansas City area:

KMBC, 910, every Sunday, 1:15 p.m., "Of Health and Happiness."

Anoplasty Versus Hemorrhoidectomy

. . . While looking for an explanation of the causes of proctologic complaints in those who have had anorectal surgery certain failures of concept as well as treatment become evident. In the correction of these errors, a method of prevention at the time of initial surgery seems possible. . . . What I do in this surgical correction does not differ greatly from operations done by other proctologists. However, I feel that the concept of anorectal surgery should be corrected to be all inclusive by calling it "anoplasty."—Mark M. Marks, M.D., Kansas City, "Anoplasty Versus Hemorrhoidectomy," *Southern Medical Journal.*

Fraternally Yours

Here We Go Again!

Usually in the summer months medical meetings are at a minimum. But, by the time this copy reaches your desk, the relentless grind of these seemingly necessary events will probably be in high gear.

Of course, the primary purpose of having medical meetings is to put on an educational program designed to improve the practice of medicine within the various medical organizations, whether it is restricted to a hospital staff or involves several thousand physicians. And this avowed purpose is commendable and salutary.

However, the multiplicity of these meetings sometimes defeats this avowed purpose. A man can take just so much and no more, if he is to carry on a reasonably active practice as his primary pursuit.

If a fellow belongs to but one hospital staff, this, with his county society meeting only ties up two nights a month. But of all of our members, certainly better than 60 to 70 per cent live in metropolitan areas, belong to more than one staff, belong to specialty groups, or general practitioner groups, so that the total meetings in some weeks will amount to four and even five nights away from home and away from practice. If all these meetings were top drawer affairs, there would be a modicum of recompense for all this nuisance, but many meetings are not in the slightest inspirational, some fail even to be instructional or educational. These latter are put on with all the imagination and spontaneity of an out-of-date railroad timetable.

This is one reason why the hyphenation of several smaller county societies into one larger organization is a healthy move. It makes for better, more worthwhile assemblies which truly fulfill the original premise for starting such organizations.

The plethora of medical meetings in some areas has been handled quite successfully on a cooperative basis. By combining and coalescing hospital staff meetings (at least on occasions), Omaha, for instance, has worked this matter out to the satisfaction of all concerned, and with a saving of many nights, which theretofore had been lost to this fetish, this scramble of every medical organization, zealously promulgating a meeting under its own aegis. All that is required to circumvent this rather archaic, atavistic hodge-podge, in any community is for the members to work out a coordinated schedule so that no one need get his feelings hurt, nor any organization be slighted in carrying out the planned, unified program.

In those areas in which such excessive number of individual organizational meetings occur, it would be simple, for instance, to have the general practitioners' group together with perhaps the surgery group (or any other speciality group) meet with the county society meeting. Thus, at one meeting a fellow could attend his county society or his general practice organization, or his speciality affiliation, at a saving of at least one night. The practicability or feasibility of such a system could be multipled many times with a marked reduction in the number of nights wasted in going to meetings and with a tremendous potential improvement in the quality of the educational program.

The principal impediment in carrying out such a program, of course, stems from the benighted, mistaken idea that somebody "in Chicago or someplace says that you must have a meeting every month to maintain your standard." Of course, there is no such ruling, and we suspect many who foist this rationalization on their gullible colleagues are fully aware of this. The real reason so many tottering group meetings are held is because of habit ("They've always had a monthly meeting, and we're going to keep on just as we are"), and, just as important, is the selfish fear that some group will lose its identity, or will be thought to be losing its potency if it permits its name to be used in conjunction with another group in fostering these joint sessions—both of these a most short sighted attitude.

V. T. W.

"A Cow Town" and Proud of It

. . . It takes a lot of money to put on a Royal. It is not self supporting. Because of the public spirited contributions of the citizens the Royal runs no deficits, but without these contributions it could not continue.

. . . The substantial citizen is bombarded almost daily with requests. . . .So many are for worthy causes. So many must be turned down. But can anyone in Kansas City afford not to support our Royal?

. . . Kansas City is a great city. Our friends on the farm have made it so. Let's dig down and put on the biggest and best Royal yet and thereby give them a great big "Thank You."—G. Wilse Robinson, Jr., M.D., *Bulletin of the Jackson County Medical Society.*

Busy . . . at What?

Somehow the old "too busy" excuse doesn't sound quite so convincing as it used to. Maybe it's because I've seen too many people who were too busy doing nothing to donate their time to doing something. Maybe it's because I've known some businessmen who seemed to do the work of about ten men but never were too busy to take on something extra.—C. B. Larrabee, *Printers' Ink.*

Missouri Medical Meetings

Sept. 27-Oct. 1: Kansas City Southwest Clinical Conference, Municipal Auditorium, Kansas City.
Oct. 12: Missouri Health Council Annual Meeting, Hotel Governor, Jefferson City.
Oct. 28-29: Missouri Academy of General Practice Annual Meeting, Hotel Governor, Jefferson City.
Dec. 1-4: American Medical Association Clinical Session, St. Louis.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—second Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

I went to the State Fair again, August 22 to 30. The Committee on Health and Public Instruction had me serving as "chief cook and bottle washer" to an exhibit "You Can Reduce" loaned to us by the American Medical Association. I had no idea there were so many fat people in Missouri. The exhibit had as a part of its attraction a set of scales and a height and weight chart. Most folks passing the exhibit were unable to withstand the temptation to weight (hoping, of course, the scales weighed light). A few well rounded specimens were unable to build up enough courage to face the pound indicator when they hoisted themselves on the scales. It seems that many of these well meaning overdeveloped individuals are going to reduce as soon as the medical profession invents an easy way to do so—but not giving up their present eating habits.

It may be that the pleasures of eating, when they bring about obesity, will be controlled by education as time goes along but you doctors have a job on your hands. (However, a few more droughts may help solve the problem.)

The best attention arrester during the entire fair was an old time organ grinder and his monkey. That monkey caught more pennies in nine days than all big league outfielders have caught fly balls this season. If an educational exhibit on reducing could be developed using that organ grinder and his monkey for the so-called "exhibit come-on," it might be possible to get all of the fat people on the fair grounds under your influence.

The attendance at the Fair this year was slightly under the 500,000 mark and established a new record.

Members in the News

The Doctors **Kelling** of Waverly, and their Clinic, are subjects of a two page feature article which appeared in the August issue of *The American Magazine*. The article reviews briefly the history of the clinic and its founder, **Dr. George Kelling**, who first settled in Waverly in 1903. His two sons, **Dr. Douglas** and **Dr. Jordon Kelling**, are associated with their father in the clinic.

New addition to the full time faculty of Washington University School of Medicine, is **Justin J. Cordonnier**, M.D. He assumed his duties on July 1, as professor of urology and head of the section of urology of the department of surgery.

A bronze plaque and the title of "Doctor of the Year" was the honor given **A. J. Signorelli**, M.D., Clayton, by the Unico Society, a national organization composed of citizens of Italian extraction. Dr. Signorelli "received this award for his outstanding work in the hospital field and also for his contribution to the health and welfare of this community by the building of a new and modern hospital." He is the founder and director of the new Faith Hospital.

The Pettis County Medical Society will present its fall series of Pettis County Medical Forum starting September 24. The first meeting will be "You and Your Heart." Members of the Medical Society will discuss the more common types of heart disease in terms that the average layman may understand and will answer questions concerning heart disease. Forums will also be presented October 22 and November 19.

Dr. Carl D. Siegel spent two weeks in camp with the 35th National Guard Division at Camp Ripley, Minnesota. He is Division Surgeon for the Division.

Dr. and Mrs. A. L. Walter, Sedalia, sailed August 27 from New York aboard the Queen Mary for Europe. While there Dr. Walter will attend the International Congress of Rheumatic Diseases in Switzerland.

A native of Mountain Grove, **James E. Lewis, Jr.**, M.D., has been appointed assistant professor of surgery at the St. Louis University Medical School, from which he was graduated in 1940.

Acting head of the State Mental Hospital at Marshall, is **George Johns**, M.D. Dr. Johns has served for some time on the staff of State Hospital No. 4 at Farmington, and is filling the vacancy caused by the recent death of R. P. C. Wilson, M.D.

The A.M.A.'s 50 year service pin was recently awarded **Wallace S. Burney**, M.D., Miller. Dr. Burney's practice dates back to May 1903, when he and **Ira Allison**, M.D., first began practice in Verona. Shortly thereafter Dr. Burney moved to Miller, where he has remained. Dr. Allison is now located in Kansas City.

The Missouri State Board of Medical Examiners will meet in Kansas City on October 22 to consider reciprocity applications. The examination will be given on October 22, 23 and 24, providing there are a sufficient number of applicants.

Both interns from St. Joseph Hospital have elected to continue practice in St. Joseph. The two are **Lawrence H. Pifer**, M.D., and **Frank H. Zahrt**, M.D.

Now administered from Burlingame, California, but originally of Kansas City, the William Volker Charities have made a $15,000 grant to the A.M.A. for research in basic sciences.

R. A. Ritter, M.D., Cape Girardeau, was speaker at the opening ceremonies of a school for nursing aides at St. Francis Hospital. The classes, running through the summer and early fall, are taught by staff physicians, nurses and sisters.

Research grants to Washington University faculty members include: $12,072 from the American Heart Association to **John R. Smith**, M.D., **Oliver H. Lowry**, M.D., and **Robert F. Furchgott**, M.D.; and from the Lasdon Foundation $15,600 to **Henry A. Schroeder**, M.D., for research on hypertension. Also received was a Damon Runyon grant of $12,700 to **Evarts A. Graham**, M.D., and a fellowship grant of $4,200 to **Jules M. Weiss**, M.D.

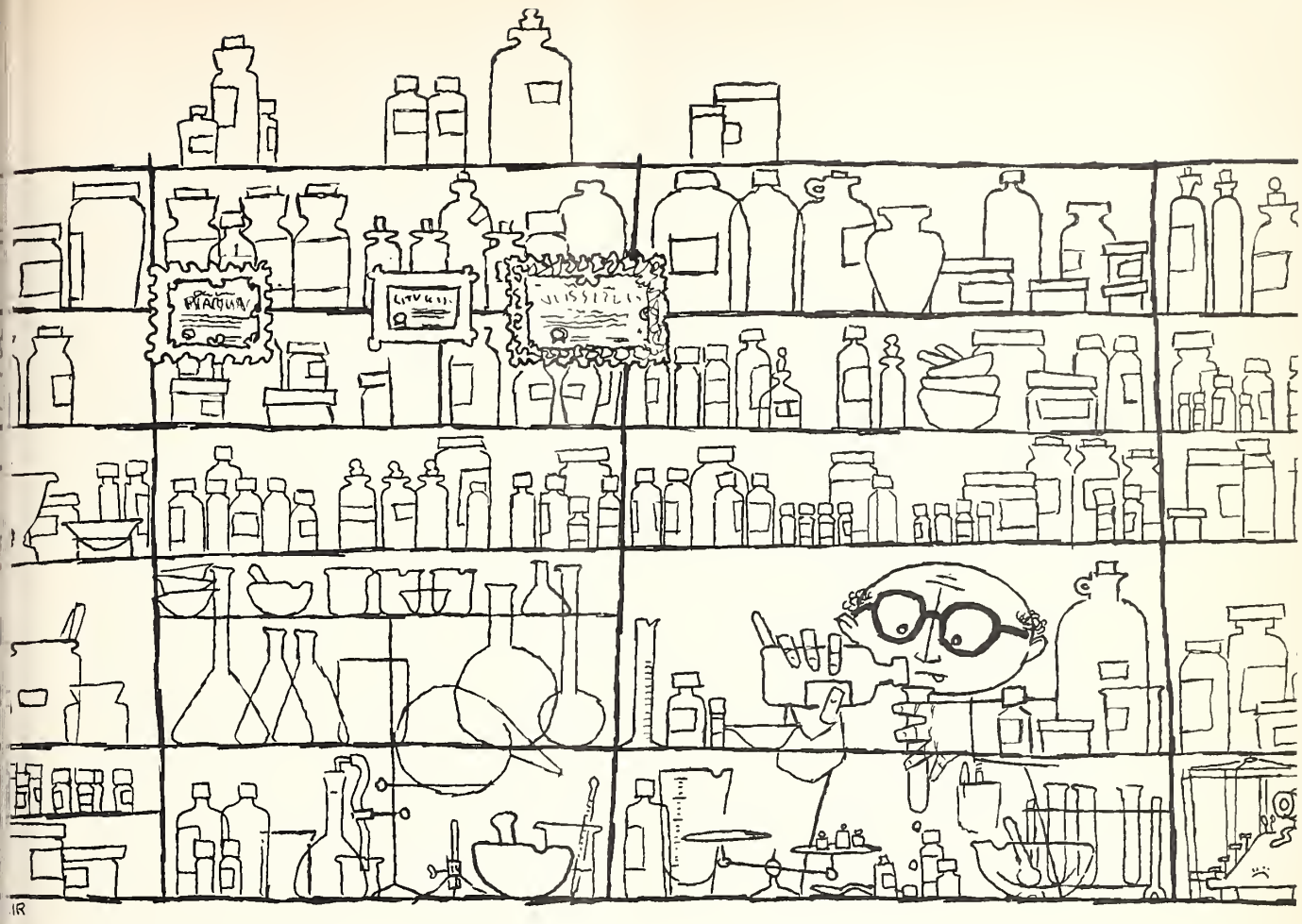
Recent locations in Missouri include **Robert C. McDonough**, M.D., as an associate of the Stricker Clinic, St. James; **G. K. Davault**, M. D., Richmond; **Ralph W. Riley**, M.D., Higginsville; **Edward F. Bare**, M.D., Tarkio; **J. Robert Cochran**, M.D., Cape Girardeau.

Chicago session of the American College of Chest Physicians heard a description of "Treatment of Bronchiectasis" by **Alfred Goldman**, M.D., St. Louis.

New National Athletic Director of Unico National, elected at their meeting in New Jersey in late summer, is **D. M. Nigro**, M.D., Kansas City.

Ralph R. Coffey, M.D., Kansas City, gave a paper "An Evaluation of the Problem of Gastro-Duodenal Surgery" at the September meeting of the International College of Surgeons in New York.

Injuries, fortunately all minor, befell three Kansas



Rx ... for an Ailing Budget

MODERN medicine brings new breadth and scope to the health care of mankind

The physician of today treats the man, not just the disease. Through education and research, he works toward prevention of illness . . . toward maintenance of good health.

Economic aspects of sickness are the province of modern medicine, too . . . as tension and strain and worry leave their physical and emotional marks.

An essential ingredient in modern living is a prepayment plan for health care that relieves patients of anxiety about their bills. You can prescribe for an ailing budget with the assurance that your patient is getting the best possible protection, when you recommend non-profit **Blue Cross** and **Blue Shield.**

Saint Louis

Kansas City

BLUE CROSS and BLUE SHIELD

Non-profit hospital-medical-surgical plans sponsored by doctors

City members during the summer. **Frederick P. Niedermeyer**, M.D., and **G. Juarez Reyna**, M.D., were both injured in the city. **Russell W. Kerr**, M.D., and Mrs. Kerr were injured, along with their two sons, in an accident in western Colorado.

Recipient of the Fifty Year Service Pin last June, **R. C. Ragan**, M.D., Kansas City, underwent major surgery at St. Luke's Hospital.

A campaign for funds to double the capacity of the twenty-bed Community Hospital in Cameron began in late summer. The local aim is $100,000, plus $10,000 from state funds, to be matched with federal funds under the Hill-Burton Act.

The newly formed Clay County Health Department, approved at a midsummer election, was organized with **S. R. McCracken**, M.D., Excelsior Springs, as one of the members.

Another Clay County organization, the Polio Chapter, met in late summer and heard a talk by **Jack W. Wolf**, M.D., Kansas City.

A newly designed nasopharyngeal speculum is described in a recent issue of the *Journal of the Michigan State Medical Society* in their lead article. The report, "The Adenoid Problem," is by **Ben H. Senturia**, M.D., St. Louis.

The cover page of the August Bulletin of the San Francisco Medical Society is a photograph of the most recent addition to the Washington University School of Medicine, St. Louis.

The annual meeting of the Missouri Health Council, at which officers will be elected, will be held at the Governor Hotel, Jefferson City, on October 12, beginning at 10:00 a. m. Physicians are particularly welcome.

At the recent Missouri State Fair in Sedalia the following physicians were seen visiting the State Association's exhibit on "You Can Reduce": **Drs. R. E. Harrell** and **B. B. Hurst**, Lebanon; **John E. Lamy** and **Carl Siegel**, Sedalia; **Martin P. Hunter**, Kansas City; **G. C. Plummer**, Buffalo; **William R. Richardson**, Union, and **P. V. Siegel**, Smithton.

H. Graham Parker, M.D., has resumed his practice in Platte City after the completion of a three year residency at Wadsworth Veterans Hospital, Leavenworth, Kansas.

IN MEMORIAM

Caldwell, James C., M.D., Fulton, a graduate of the University Medical College of Kansas City, 1912; member of the Callaway County Medical Society; aged 70; died July 31.

Danglade, James H., M.D., Kansas City, a graduate of the University of Kansas School of Medicine, 1926; member of the Jackson County Medical Society; aged 53; died August 4.

Fordyce, Claude P., M.D., St. Joseph, a graduate of Washington University School of Medicine, 1910; member of the Buchanan County Medical Society; aged 70; died August 18.

NEW MEMBERS

Baker, Philip J., M.D., Kansas City
Benoit, Hector W., Jr., M.D., Kansas City
Brownsberger, Robert H., M.D., Kansas City, Kansas
Centner, Paul J., M.D., Kansas City
Clark, Irving H., M.D., Hickman Mills
Cramer, Quentin, M.D., Kansas City
Epple, Kathryn C., M.D., Mexico
Epple, Lawrence K., M.D., Mexico
Grabske, Charles F., Jr., M.D., Independence
Johns, William C., M.D., Kansas City
Justus, John B., M.D., Kansas City
McGannon, Paul T., M.D., Kansas City
Mangels, Kenneth A., M.D., Independence
O'Hearne, John J., M.D., Kansas City
Simon, Sanford, M.D., Kansas City
Staley, Harry R., M.D., Kansas City
Ward, Robert L., M.D., Kansas City

Cook County Graduate School of Medicine

Postgraduate Courses—1953

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting October 12, October 26, November 9
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting October 26
Surgical Anatomy & Clinical Surgery, Two Weeks, starting November 9
Gallbladder Surgery, Ten Hours, starting October 26
General Surgery, Two Weeks, starting October 12
Surgery of Colon & Rectum, One Week, starting October 26
Thoracic Surgery, One Week, starting October 12
Esophageal Surgery, One Week, starting October 19
Breast & Thyroid Surgery, One Week, starting October 26
Fractures & Traumatic Surgery, Two Weeks, starting October 26

GYNECOLOGY—Intensive Course, Two Weeks, starting October 19
Vaginal Approach to Pelvic Surgery, One Week, starting November 2

OBSTETRICS—Intensive Course, Two Weeks, starting November 2

MEDICINE—Electrocardiography & Heart Disease, Two Weeks, starting October 12
Gastroenterology, Two Weeks, starting October 26
Gastroscopy, Two Weeks, starting November 2

DIAGNOSTIC X-RAY—Clinical Course every week by appointment

CYSTOSCOPY—Ten day practical course starting every two weeks

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Grand River Medical Society

A dinner meeting of the Grand River Medical Society and its Auxiliary was held at the Strand Hotel, Chillicothe, Thursday, September 10. The scientific program was arranged by the Missouri Academy of General Practice as follows: Everett Sugarbaker, M.D., Jefferson City, "Office Diagnosis of Lesions of the Breast"; Earl Loyd, M.D., Jefferson City, "The Management of Diabetes."

E. A. Duffy, M.D., *Secretary*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

Paul Hines, M.D., Kansas City, spoke at a meeting of the Chariton-Macon-Monroe-Randolph County Medical Society at the Woodland Hospital, Moberly, on Thursday night, September 10. He discussed "Psychiatry in General Practice."

C. C. Cohrs, M.D., *Secretary*

SIXTH COUNCILOR DISTRICT

C. GORDON STAUFFACHER, SEDALIA, COUNCILOR

West Central Missouri Medical Society

The first meeting of the newly formed West Central Missouri Medical Society (Bates, Cass, Cedar, St. Clair, Vernon Counties) was held at the Nevada Country Club on Thursday night, September 10. After a delicious dinner the group enjoyed an interesting and practical scientific program given by Drs. H. J. Rinkel and S. F. White of Kansas City. Dr. Rinkel spoke on "Allergy" and Dr. White discussed "Surgical Indications in Genito-Urinary Disease."

O. B. Barger, M.D., *Secretary*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski-Maries County Medical Society

The annual picnic of the Phelps-Crawford-Dent-Pulaski-Maries County Medical Society was held at Dr. E. A. Stricker's Camp near St. James, Missouri, Sunday, August 16. The ladies outshone themselves in preparing good things to eat and after a round or two of outdoor sports those "east" were marvelous. A number of guests were present to enjoy the occasion.

M. K. Underwood, M.D., *Secretary*

South Central Counties Medical Society

The South Central Counties Medical Society met for dinner at the Arcade Hotel in West Plains, Wednesday night, August 19, with the following members and visitors present: Drs. R. W. Denney, H. G. Frame, S. W. Connor and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; S. G. Kramer and J. B. Kelley, Houston; M. B. Perkins, Willow Springs; C. F. Callihan, Rollin H. Smith and J. N. Wiles, West Plains; C. W. Cooper, Thayer; William J. Park and Don F. Gose of Springfield and Mr. William J. Rowden, technician of West Plains and the wives of most of them.

After dinner the ladies went to the house of Dr. Callihan for the evening and the meeting was called to order by the president, Dr. Kramer, and turned over to the visitors from Springfield, and Dr. Park spoke on "Infectious Hepatitis" and Dr. Gose spoke on "Hemorrhage From the Alimentary Canal" and showed slides of diseased conditions of various parts of the canal.

Dr. Perkins, president-elect, who acted as chairman of the last part of the meeting, expressed the thanks of the society to the speakers and also read some letters from the district Councilor, Dr. J. H. Summers, Lebanon.

Minutes of last two meetings were then read and approved.

Dr. J. B. Kelley, who is taking over the practice of Dr. Kramer while he is in service in the army, expressed a desire to join the society. He was welcomed and given an application blank to be presented and and acted on at the next meeting.

The meeting then adjourned to meet in Houston, September 16.

A. C. Ames, M.D., *Secretary*

Missouri Physician Comments on Home Management of Poliomyelitis

A recent article by Randolph Batson, Nashville, Tennessee, on "Medical Management of the Poliomyelitis Problem" is interesting reading. Necessarily one attempts to relate his suggestions to our own situation in Missouri, particularly to the rural portion of the State.

Batson's plan of Home Management is entirely practical where the family physician has adequate time to study his patient with acute polio, at least twice in every twenty-four hours and where the intelligent cooperation of the family and the community can be obtained. He lists a series of procedures and situations that require at the minimum diligent twice daily evaluations of the patient in order to anticipate complications requiring hospitalization and prevent catastrophies.

Granted that the physician has the time, therefore, to spend with his patients, granted that the families are entirely intelligent and cooperative so that they can carry out all of the procedures, granted that gamma globulin is readily available to help in the protection of exposed individuals, granted that necessary laboratory procedures can be carried out in the home in order to establish a satisfactory diagnosis, granted that the community does not respond unfavorably to the idea of retaining patients in homes—granted all these, then the home problem of polio care is perfectly practicable. However, after considerable number of years of familiarity with rural Missouri families and with the burden of care on rural Missouri medical men in the last several years this type of program seems to be highly impracticable on any extensive scale in rural

A Wise Choice Against Resistant Cocci

ERYTHROCIN

a selective antibiotic

A DRUG OF CHOICE

st the majority of coccic infections—especially when its are sensitive to other antibiotics or the cocci are ant.

RUG OF CHOICE

st staphylococci—because of the high incidence of ylococcic resistance to other antibiotics.

A DRUG OF CHOICE

se it is less likely to alter normal intestinal flora other oral antibiotics, except penicillin; gastroinal disturbances are rare; no serious side effects ted.

ADVANTAGEOUS

because the special acid-resistant coating, developed by Abbott, and Abbott's built-in disintegrator, assure rapid dispersal and absorption in the upper intestinal tract.

Prescribe ERYTHROCIN

in pharyngitis, tonsillitis, otitis media, sinusitis, bronchitis, pneumonia, scarlet fever, erysipelas, pyoderma, certain cases of osteomyelitis, and other indicated conditions. Abbott

Trade Mark for

ERYTHROMYCIN, ABBOTT CRYSTALLINE

areas. It is difficult enough to keep track of a number of patients in a hospital where the facilities for care are reasonably good but it becomes a totally different situation for a rural physician to do these necessary things for patients scattered around in a number of rural homes in which no medical social worker, visiting nurse or visiting physical therapist is available. Little time would be available for the rest of his patients. It would seem that home care seems to be based largely on the desire of the National Foundation for Infantile Paralysis to get off the hook, so to speak, financially, because the burdens of care placed on this organization are known to be increasing.

Regular Army Physicians May Now Resign

Regular officers of the Army Medical Service may resign and leave the service under a new and more liberal Department of the Army policy, according to Major General Silas B. Hays, Acting The Surgeon General of the Army.

Beginning with officers having the longest periods of service, a number will be allowed to resign each month, upon recommendation of The Surgeon General, provided they have met with certain service requirements. Previously, resignations were accepted only in cases of extreme hardship.

According to the new policy, regular officers who have no obligatory commitments to the Army and have served in the Regular Army for a period of three years are eligible for release. However, if they have served for less than eight years, they must accept commissions in the Reserve.

"Even though we expect to lose some officers in the next few months," General Hays said, "we believe the new policy will encourage physicians to enter the Regular Army because they will no longer be required to commit themselves to an indefinite term of service. Actually, I believe that our increasing percentage of officers will find the military service so professionally stimulating and so pleasant that they will make it their career," General Hays concluded.

Missouri Academy of General Practice

The fifth annual scientific assembly of the Academy will be held at the Governor Hotel, Jefferson City, Wednesday, October 28 and Thursday, October 29, 1953. Wednesday morning will be given over to a business meeting with the scientific program opening with a luncheon session, featuring Ralph Kinsella, M.D. (internist), St. Louis, on "The Evaluation of Chest Pain." Other speakers on the Wednesday afternoon program include: Henry R. McCarroll, M.D. (orthopedist), St. Louis; Thomas E. McMillan, M.D. (urologist), Kansas City; Paul Williamson, M.D. (general practitioner), Colorado; Joseph C. Jaudon, M.D. (pediatrician), St. Louis. The annual banquet will be held Wednesday evening with Roscoe L. Pullen, M.D., Dean, University of Missouri School of Medicine, Columbia, as guest speaker.

Essayists on the Thursday, October 29, program include: Charles Brasher, M.D., Superintendent, Missouri Tuberculosis Sanatorium, Mount Vernon; Harry B. Stauffer (eye, ear, nose and throat), Jefferson City; Carl A. Moyer, M.D. (surgeon), St. Louis; William A. Sodeman, M.D. (internist), Columbia; Paul Williamson, M.D. (general practitioner), Colorado. These speakers will also take part in a luncheon round table discussion Thursday noon.

℞: Common Sense

JESSE D. RISING, M.D.

The sulfonamides have a rather unique claim to fame: in something less than twenty years they have made the complete cycle of rags-to-riches. From the parent "miracle drug," Prontosil, there was spawned in the thirties a whole generation of near and distant chemical relatives destined to "wipe out all infectious disease." Their downfall became imminent during a short but noisy period when, due largely to misuse, all sulfonamides were roundly damned as dangerous. This was followed rapidly by the fantastic increase in antibiotic usage, which theoretically pushed the sulfonamides forever into the Dark Ages of Medicine. That they were so considered is evident from the statement made by a well known Professor of Medicine in 1949: "There is presently no indication for the use of a sulfonamide!" And that he could not have been more wrong is equally evident.

Sulfonamide drugs still have a place in the treatment of infections caused by gram positive cocci, gram negative cocci and gram negative bacilli (except typhoid and paratyphoid).

One of the most important toxic reactions to these drugs is crystalluria caused by precipitation of relatively insoluble acetylated sulfonamide in the renal tubules, possible resulting in complete anuria. To avoid this, combinations of sulfonamides have been tried, since it has been shown that their effectiveness is related to the sum of the drugs used, while the solubility is greater than a total dosage of any one of the components. The question of undersirable sensitization to a group of sulfonamides has been raised, but it appears that sensitization depends on the dosage of any one of the group, and seems to be reduced when mixtures are employed.

Various combinations are available: sulfadiazine and sulfamerazine in equal parts, usually 0.5 gram tablets and 0.3 gram pediatric tablets. They may be prescribed as Dia-mer-sulfonamides (NNR), or under such trade names as: Bi-Sulfazine (Warren-Teed), Duozine (Abbott), Mer-Diazine (McNeil), Sulfadimer (Pitman-Moore) and Sulfonamides-Duplex (Lilly).

Acet-dia-mer-sulfonamides (NNR) contain equal quantities of sulfacetamide, sulfadiazine and sulfamerazine for a total of 0.5 gram in the usual

50 YEARS AGO

"... in a word, deficiency of fat in the food is one of the chief factors in the production of rickets." (1)

TODAY...

We know that lack of fat-soluble vitamin D in the diet is one of the major causes of rickets. Other deficiency diseases are also caused by a lack of adequate vitamins in the diet.

POWDER and LIQUID

Made from Grade A Milk, (U. S. Public Health Service Milk Code) modified by replacement of the milk fat with animal and vegetable oils and by the addition of carbohydrates, vitamins and iron.

VITAMIN CONTENT PER QUART OF NORMAL DILUTION:

Vitamin A	2500 U.S.P. Units	Thiamine	0.6 milligrams
Vitamin D	800 U.S.P. Units	Niacin	5.0 milligrams
Vitamin C	None	Riboflavin	1.0 milligrams

A source of vitamin C should be prescribed by the physician.

BAKER'S MODIFIED MILK IS FORTIFIED BY *Synthetic* VITAMINS TO PROVIDE ADEQUATE AMOUNTS OF ALL RECOMMENDED VITAMINS (except C)

(1) Cheadle—*Artificial Feeding and Food Disorders of Infants.* Sixth Edition (1906)

BAKER'S MODIFIED MILK

THE BAKER LABORATORIES INC.

Main Office: Cleveland 3, Ohio
Plant: East Troy, Wisconsin

Division Offices: Atlanta, Dallas, Denver, Greensboro, N. C., Los Angeles, San Francisco, Seattle

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

tablet. Proprietary preparations include Dorsulfas (Smith-Dorsey), Incorposul (Blue Line) and Tricombisul (Schering).

Perhaps the most popular combination is Methdia-mer-sulfonamides (NNR), marketed by that name by Premo. It is also available as: Metha-Merdiazine (McNeil), Terfonyl (Squibb), Trifonamide (Vanpelt and Brown), Truozine (Abbott) and several others.

Average cost to the patient of these mixtures is about 5 to 8½ cents per tablet, the least expensive being Duozine. Pediatric tablets (confections) and suspensions range from 1 to 3 dollars for a fifteen-dose prescription. As would be expected, the least expensive are the nonproprietary formulas as compared with proprietary preparations costing 50 per cent to over 100 per cent more.

These proprietary products are all Council accepted, but the physician who is interested in keeping prescription costs to a minimum would do well to prescribe them by their nonproprietary (U.S.P. or N.N.R.) names. This permits the druggist to eliminate unnecessary stock duplication—in itself a cause of still higher prices.

Admitted that the generic names adopted by the Council on Pharmacy and Chemistry are awkward, and may occasionally confuse the pharmacist, but this should not present a major problem in the face of the manifest benefits of using official and Council accepted drugs under their nonproprietary names.

Letters to Missouri Medicine

To the Editor:

Really, Missouri needs to train more students in the practice of medicine. Washington University has become a superior college for the inculcation of scientific medicine which will supply the North and West with teachers, resident physicians in hospitals, specialists and research workers. Curiously, the St. Louis University is also following this trend. Both schools now have a large waiting list of prospective doctors of medicine who want to become specialists. Nothing derogatory can be said against this pressure. The West needs well trained specialists, who will control many of the large hospitals and greatly advance medical and surgical knowledge. But in Missouri we need general practitioners who are proficient in the prevention and therapy of all the common diseases.

Can the new prospective school in Columbia at the State University supply this demand? It can not unless the curriculum approved by the Association of Medical Colleges is modified considerably; not research but practice is needed.

Some means must be found to encourage the superior country boy graduate from high school, to choose a medical career. He will need about $12,000 even if he practices economical habits; so the father, the county and the University will be compelled to help him.

Then some public spirited citizens could provide a suitable but well equipped office building; or, as was done at Steelville, the doctor built it himself with the help of his relatives and the bank. (See previous letter.)

Could not some legislation be enacted that will restrict about one half of the new medical school to young men reared in the rural areas?

We need young doctors who are contented in rural districts. A country boy who marries a city girl will often find that she does not happily enter into the town's social affairs. It is easier for the young doctor reared in the city and married to a country woman to adjust himself to an arduous country practice. The question of religious training, as already mentioned, is difficult to answer when children arrive and no churches of their faith are available.

The rural physician and wife are expected to be leaders in the hygienic and moral characteristics of the community. Let me quote: "The physician is a first citizen wherever he practices. He owes it to himself, to his profession and to his country to be first among those who are vigilant in defense of our tried and tested society of abundance through opportunity." L. F. Lee, MISSOURI MEDICINE, May 1953.

Let us rejoice that the new medical school will be located at Columbia, away from the great metropolitan areas. Perhaps then some general practitioners will be on the faculty and demonstrate with a large outpatient department both home and hospital diagnosis and treatment. Or could the School of Medicine demand that the young graduate be assigned to live with a practitioner for six months or more? By this apprenticeship he will learn to distinguish the diseases which should need thorough laboratory study and those that need hospitalization and a competent surgeon.

The rural women now demand hospital service during parturition, can the rural physician travel thirty or more miles to wait on her, or shall obstetrics be almost completely relegated to the gynecologic specialist?

Dr. F. D. Murphy, Dean of the University of Kansas School of Medicine, started a movement to increase the number of physicians of the 1951 class; more than three fourths have located in Kansas. How did he do this? In 1950 and 1951 nearly eighty graduates began practice in towns having a population of 1,500 or less.

We need to launch a similar campaign. We want about fifty young doctors to locate in rural Missouri annually for the next ten years.

JOHN ZAHORSKY, M.D.
STEELVILLE, MO.

BOOK REVIEWS

CLINICAL DIAGNOSIS BY LABORATORY METHODS. A Working Manual of Clinical Pathology. By James Campbell Todd, Ph.B., M.D., Late Professor of Clinical Pathology, University of Colorado School of Medicine; Arthur Hawley Sanford, A.M., M.D., Emeritus Professor of Clinical Pathology, The Mayo Foundation, University of Minnesota; Director of Laboratories, Rochester State Hospital; and Benjamin B. Wells, M.D., Ph.D., Professor of Medicine, Depart-

50 *and six*

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

The

RALPH

SANITARIUM

Established 1897

Ralph Emerson Duncan, M.D.
DIRECTOR

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624

ment of Medicine, School of Medicine, University of Arkansas. 12th Edition with 946 Illustrations, 197 in Color, on 403 figures. Philadelphia. W. B. Saunders Company. 1953. Price $8.50.

With the addition of Dr. Benjamin J. Wells, Professor of Medicine at Little Rock, Arkansas, to the authorship of this standard text, the clinical applications of laboratory studies gain further emphasis.

Since the last edition, published in 1948, represented rather a complete revision of the book, the current volume includes relatively few changes. The sections on bacteriology and serology have been revised to conform to current generally accepted nomenclature of Bergey in the case of the former, and the serologic tests for syphilis are outlined as recommended by the United States Public Health Service.

There have also been minor additions to the chapters on Chemistry, Urinalysis, and Hematology.

In essence, this edition represents essentially little alteration from the last. L. E. S.

PHYSICAL EXAMINATION OF THE SURGICAL PATIENT. By J. Englebert Dunphy, M.D., Associate Clinical Professor of Surgery, Harvard Medical School; and Thomas W. Botsford, M.D., Clinical Associate in Surgery, Harvard Medical School. 326 pages with 188 figures. Philadelphia and London. W. B. Saunders Company. 1953. Price $7.50.

This is the first edition of this book. It is relatively short, well written and easily read. The contents are divided into two main parts. Part I pertains to the elective examination of the surgical patient. This first part is composed of thirteen chapters; each dealing with a separate anatomic area. Both preoperative and postoperative physical findings are included. Numerous details not included in standard texts on diagnosis are presented. The entire text is well illustrated with drawings and x-rays. Included in the first part is a chapter on the examination of the abdomen of infants and children.

Part II has to do with the emergency examination. This section is composed of the final six chapters. Discussed separately are injuries of the head and neck, chest injuries, abdominal injuries, genito-urinary injuries and injuries of the skeletal system.

A bibliography is included in the back of the book in addition to a check list for a complete physical examination and the index.

This book is recommended reading for all physicians regardless of specialty. J. D. G.

ENCYCLOPEDIA OF ABERRATIONS. A Psychiatric Handbook. Edited by Edward Podolsky, M.D., State University of New York Medical College. With a foreword by Alexandra Adler, M.D., New York University College of Medicine. New York. Philosophical Library. 1953. Price $10.00.

In this book various psychiatric terms or conditions are treated of in alphabetical order. There seems a certain lack of plan or standard. In one case there will be a mere definition and in another a long prolix discussion, including detailed case histories, that incidentally may not be too apt. One subject, say "accident prone behavior" will have pages of psychoanalytic gyabbledygook while another like manic-depressive has a concise orthodox treatment. Dementia praecox and schizophrenia each has an exposition, causing some confusion. Chloral hydrate delirium and nun's melancholy receive some attention and "hair pulling" rates ten pages. "Murder and suicide as a defense against schizophrenia" is a discussion of eight pages, technical and original enough for any scientific journal.

The discussion of body image disturbances is not up-to-date. Moreover, the idea of psychogenic and hypnotic body-image disturbances is not a good distinction; in fact all such disturbances on closer examination turn out to be psychogenic. Consciousness is correctly described as being clouded in certain basal injuries but the supposed cortical disturbances are likely all functional.

Nevertheless the book is interesting and instructive for many classes of readers aside from the mature specialist. L. B. A.

GIFFORD'S TEXTBOOK OF OPHTHALMOLOGY. By Francis Heed Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School; Consulting Surgeon, Wills Eye Hospital, Philadelphia. 5th Edition. 488 pages with 281 figures and 26 color plates. Philadelphia and London. W. B. Saunders Company. 1953. Price $7.50.

The 5th edition of Gifford's textbook as revised by Adler has many improvements over the previous edition. The size print and the topic headings have been changed and part of the material is presented in a more didactic manner.

The illustrations are much the same as in the previous edition and are superior to those of the other texts.

This book can be recommended for the medical student, the general practitioner, and yet is complete enough that it can be used as an outline for study for those especially interested in ophthalmology. W. R. E.

TREATMENT OF MENTAL DISORDER. By Leo Alexander, M.D., Director, the Neurobiological Unit, Division of Psychiatric Research, Boston State Hospital, and Instructor in Psychiatry, Tufts Medical School. 507 pages with 143 figures. Philadelphia and London. W. B. Saunders Company. 1953. Price $10.00.

This is a detailed and comprehensive work covering psychologic and physical (i.e. electric shock, subshock, insulin, lobotomy) methods of treating the neuroses and psychoses. The approach is meticulous and scholarly with extensive references to the literature.

The book is said to be intended for students and physicians but for these it will be heavy going. Rather it will prove most useful for interns and specialists in psychiatric services and practice, for whom it provides summaries not otherwise available.

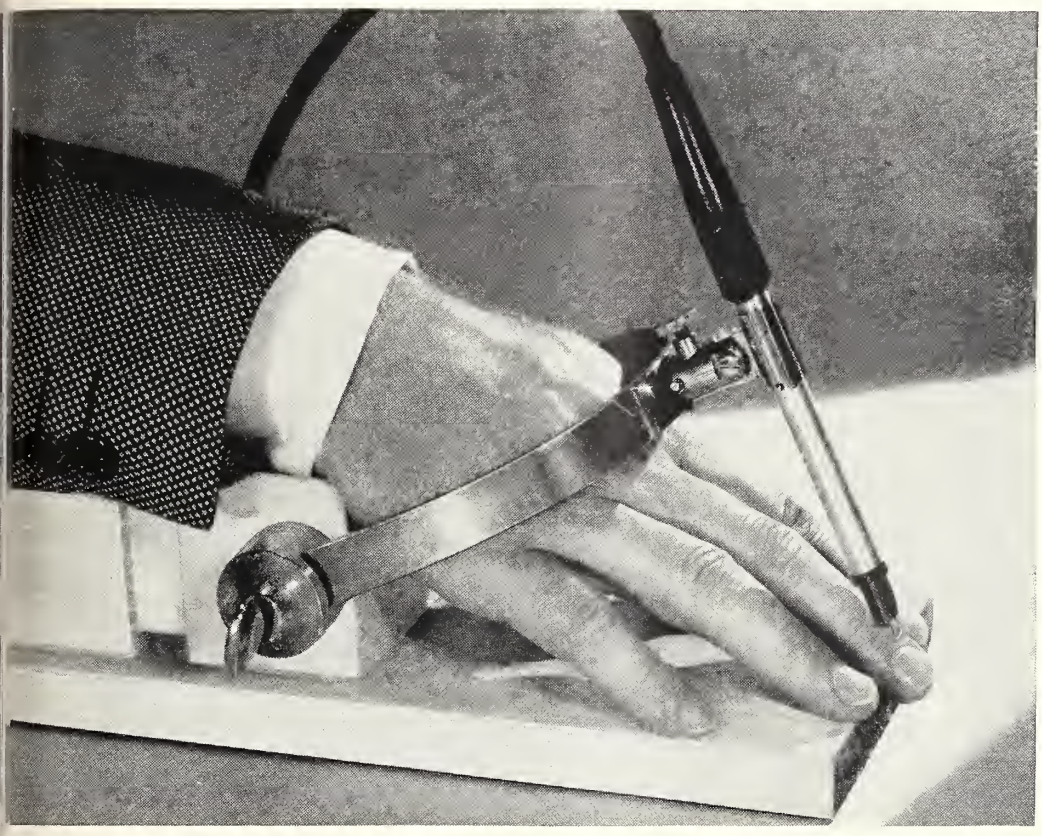
Especially to be commended is the broadminded position that the causation of these conditions may be physical or physiologic as well as or instead of solely psychologic. Assuredly when medicines are given or one of the physical methods employed the effect is mostly in the physical or physiologic sphere.

The book is heartily recommended. L. B. A.

'hysiological test

ompares Kent's

Micronite" Filter with other cigarette filters



compare the efficiency of various ers as they affect physiological re-nses in the cigarette smoker, drop urface skin temperature at the last lanx was measured.

Jsing well-established procedures, subject smoked conventional filter rettes and the new KENT with exclusive "Micronite" Filter.

'or every other filter cigarette, the p in temperature averaged over 6 rees. For KENT's Micronite Filter, re was no appreciable drop.

'hese findings confirm the results of er scientific measurements that w these facts: ordinary cotton, cel-se or crepe paper filters remove a ll but ineffective amount of nico-e and tars; KENT's Micronite Filter *approaches 7 times the efficiency of other filters in the removal of nicotine and tars* and is virtually twice as effective as the next most efficient cigarette filter.

Thus KENT, with the first filter that really works, gives the one smoker out of every three who is susceptible to nicotine and tars the protection he needs . . . while offering the satisfaction he expects of fine tobacco.

For these reasons, smokers have made the new KENT the most popular new brand of cigarette to be introduced in the last 20 years.

If you have yet to try the new KENT, may we suggest you do so soon?

Takes out up to 7 times more nicotine and tars than other filter cigarettes

FUNCTIONAL ENDOCRINOLOGY FROM BIRTH THROUGH ADOLESCENCE, by Nathan B. Talbot, M.D., Associate Professor of Pediatrics, Harvard University; Physician, Children's Medical Service, Massachusetts General Hospital; and Edna H. Soebel, M.D., Formerly Research Fellow in Pediatrics, Harvard University; at present Instructor in Pediatrics, University of Cincinnati College of Medicine; Research Associate Children's Hospital Research Foundation and the Fels Research Institute, Antioch College; and Janet W. McArthur, M.D., Instructor in Gynecology, Harvard University; Assistant Physician, Massachusetts General Hospital, and John D. Crawford, M.D., Instructor in Pediatrics, Harvard University; Assistant Physician, Children's Medical Service, Massachusetts General Hospital. Commonwealth Fund, Harvard University Press, Cambridge, Mass. 1952.

Nathan B. Talbot and coworkers did a comprehensive study of pediatric endocrinology and in this book their work is ably unfolded. Each chapter begins with an anatomic diagram and a microscopic section of the ductless gland to be discussed and progresses with basic considerations such as chemistry, cell metabolism, relation to other endocrines, physiologic variations and then pathologic states. There are 579 figures. The cumbersome detail such as history, anatomy and histology has wisely been omitted.

Opinions are formulated which heretofore have never been published concerning original data and investigation. Endocrine dosages throughout are expressed in terms of surface area instead of body weight, which is much more accurate. A convenient chart is placed inside the front cover which quickly converts height and weight to body surface area.

Brief case histories with photographs, x-rays and graphs of laboratory data bring a bird's eye view of the disease considered, and possible diagnosis will enter the reader's mind which may enable him to more ably serve his patients by being able to make that rare diagnosis which so often is missed.

Subjects of great interest to the pediatrician are discussed with new slants on such things as infantile tetany, hypothyroidism and adrenal disease. Diseases such as diabetes are discussed more completely from a treatment standpoint than most available texts. A complete discussion of the importance of potassium in this disease and how to use it makes this point alone important enough to read the treatise.

Hormones are discussed which previously I have never heard of, such as glukagon from the beta cells of the pancreas. R. F. G.

PHYSICAL MEDICINE AND REHABILITATION FOR THE CLINICIAN, edited by Frank H. Krusen, M.D., with articles by various other doctors. W. B. Saunders Company, Philadelphia and London. 1951. Price $6.50.

This book is a compilation consisting of contributions by twenty-four men and women specially qualified to discuss phychiatry and its relations to other branches of medicine. It should serve a useful purpose. Recent years have seen a number of books devoted to physical medicine, "Paradoxically at once the newest and the oldest field in medical practice." I plead guilty to an indictment that may be brought against many of my colleagues of failure to appreciate the importance of this lusty infant in the family of recognized medical specialties.

The first two sections of the book—"Therapeutic Application of Physical Agents" and "Procedures and Diagnostic Applications of Physical Agents and Procedures"—are written by psychiatrists, neurosurgeons, physicists, physiologists, social workers and therapists. It seems to me that the order of Section I and Section II should logically have been reversed. The present arrangement is probably a concession to the claim in the title that the book is written for the clinician.

Section III is made up of seventeen articles by fourteen contributors. As often happens in such collections there is an unevenness and lack of continuity that is somewhat disturbing. There is a disparity in the space allotted to the various subjects. In spite of these considerations the clinician not well versed in physical medicine can glean from these articles much information and much to stimulate his interest.

The last 115 pages are devoted to the fundamental anatomic and physiologic considerations that lay the groundwork for the application of therapeutic procedures. Although the title of this section may sound forbidding I found it the most rewarding part of the book. This opinion may not be shared by others.

This book, as was said at the outset, will be useful to clinicians like myself who recognize the importance of the segment of medicine which has to be integrated into their approach to their efforts to serve adequately many of their patients. L. S.

HANDBOOK OF DIGESTIVE DISEASES by John L. Kantor, M.D., F.A.C.P., Late Associated in Medicine, Columbia University; Gastro-enterologist and Associate Roentgenologist, Montefiore Hospital, New York; and Anthony M. Kasich, M.D., F.A.C.P., Lecturer in Medicine, Columbia University; Adjunct Physician, Montefiore Hospital; Assistant Visiting Physician, Bellevue Hospital; Assistant Adjunct Gastro-enterologist, Lenox Hill Hospital, New York. Second Edition. Illustrated. C. V. Mosby Company. St. Louis. 1949. Price $11.00.

There has been an increasing need for a compact volume on digestive diseases to keep pace with the subspecialty of gastro-enterology. This book covers the general field, and treats in more detail the most common maladies. Specifically, the authors arranged the book anatomically and each significant division of the gastrointestinal tract is given a separate chapter. Several chapters concern diagnostic tests, others the psychogenic approach to gastro-enterologic problems, and still other chapters deal with parasitology.

Each important disease entity is presented with separate paragraph headings which treat particularly with the following: definition, etiology, pathology, symptoms, diagnosis, treatment and prognosis. This organization of the diseases is an aid in orientation to the reader.

The illustrations are clear and the roentgen reproductions exceptional, especially as concerns visual clarity and appropriativeness of choice. In addition, some photomicrographs are reproduced and a fair number of gross specimens presented. Plain line figures are utilized to emphasize roentgen appearances.

There is a wealth of information in this book which should prove of value to internist and surgeon alike. The resident and intern would find this volume of great help. This work is testament of the authors' side experience with diseases of the digestive tract.

R. L.

Research Clinic

107 West Linwood Boulevard **Jefferson 5353** **Kansas City 2, Missouri**

- **Fifty physicians representing all specialties**
- **Every modern diagnostic laboratory aid**
- **All reports returned to referring physician**
- **Moderate fees for complete diagnostic survey**

Physicians invited to visit or write for information

WARREN F. WILHELM, M.D. **MEDICAL DIRECTOR**

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
HOMER V. CAPPARELL, M.D.
LEROY E. BOSTIAN, M.D.

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

OCULOROTARY MUSCLES, by Richard G. Scobee, M.D., Assistant Professor of Ophthalmology, Washington University School of Medicine, St. Louis, Missouri. Second Edition. St. Louis, C. V. Mosby Company 1952. Price $11.00.

As stated by the author in his preface, this second edition, as was the first, is intended primarily for the student. An attempt is made to present a "simple and yet fairly accurate diagnostic system to be employed in the field of disturbances of ocular motility." In developing this theme sections on functional and surgical anatomy are included. The portions on physiology were rewritten in more detail and are based on more recent studies by the author and by others who have contributed to knowledge in the areas of retinal correspondence, the horopter, proprioception, binocular factors and the heterophorias. In laying the foundation for a rational diagnostic system chapters are devoted to the laws of innervation, binocular factors, physiology and mechanics and the neurophysiology of the oculorotary mechanism.

Sections II and III are devoted to latent deviations, the phorias, and to the manifest deviations—the tropias in which the various etiologic factors are discussed along with associated symptoms, pathologic physiology, diagnosis and treatment of each condition.

Section IV covers 125 pages devoted to "Making the Diagnosis." In it is presented a careful and detailed description of testing technics. Much of this material is original with the author or bears the marks of his genius in the manner of application. This section, which is only slightly expanded in the second edition, covers practically every factor concerned in the various deviations in a clearly understandable manner and likewise the necessary diagnostic tests and methods by which abnormalities are revealed and measured. It was the author's conviction that every oculorotary deviation from normal was the result of some pathologic condition, anatomic or functional, affecting one or more muscles and that the diagnostic study should reveal this condition as a basis for determining the therapeutic approach.

The section on therapy has been expanded from thirty pages in edition one to eighty-four pages in edition two. In this the author has given much more specifically nonsurgical measures of therapy and the basic procedures in surgical treatment. More emphasis is given to the indications for each type of basic procedure since it is considered more important to aid the student in identifying the offending muscle or muscles, and in determining the proper type of operation, shortening or lengthening. The detailed technic of each procedure can be gleaned from the standard text on ocular surgery.

Throughout the book the clear definite thinking of the author is revealed, and in many places appear touches of humor so characteristic of his bright personality.

This book in its precision of thought and clarity of statement is invaluable to anyone who would practice in the realm of the oculorotary muscles unless he be a master of the subject. Few can hope to attain the mastery here displayed. B. Y. A.

PATHOLOGIC PHYSIOLOGY: Mechanisms of Disease. Edited by William A. Sodeman, M.D., F.A.C.P., The William Henderson Professor of the Prevention of Tropical and Semi-Tropical Diseases, Tulane University of Louisiana School of Medicine; Senior Visiting Physician, Charity Hospital of Louisiana; Consultant in Medicine, U. S. Marine Hospital at New Orleans. Illustrated. W. B. Saunders Company, Philadelphia and London. 1950. Price $11.50.

This volume, a collaborative effort by twenty-five authors, approaches problems of disease in the field of internal medicine from the standpoint of disturbed physiology. Unlike the usual text, which is devoted to discussions of etiology, pathology, symptoms and treatment, this work analyzes symptoms and signs and the mechanisms of their development. The monograph is not intended to take the place of standard texts on physiology or textbooks of medicine. It does not aim at the completeness of either, but does try to bridge the gap between them by presenting a clinical picture of disease seen as physiologic dysfunction. An attempt is made to promote understanding of how and why symptoms appear so that the student or physician may have a reasonable explanation for the findings he elicits. Neurologic problems are considered only as they are related to the various disease groups. The same is true of metabolic disturbances and disorders of acid-base balance.

Without question, this is one of the important medical books of this decade. Every practicing physician should be helped to do better medicine with a study of this book as a background. There is a tremendous amount of information on the cardiovascular system, endocrine glands, digestive system, infectious disease and allergy.

The discussions are comprehensive rather than exhaustive and furnish an excellent foundation for modern conceptions of disease processes.

My only objection is that the text is difficult to read but its wealth of information makes it a valuable book to own and peruse. B. S. P.

OSLER APRORISMS, Sir William, From His Bedside Teachings and Writings. Collected by Robert Bennett Bean, M.D. (1874-1944); Edited by William Bennett Bean, M.D. Henry Schuman, Inc., New York. 1950. Price $2.50.

Usually a collection of aphorisms is a weighty tome, about as dead as the man who originally said them. It is a considerable pleasure, then, to find the "Aphorisms" of Sir William Osler to be collected in a pocket-sized book, and to reflect the humor as well as the clarity of thought and the common sense for which he was noted. It is based on notes taken by the late Robert Bennet Bean, M.D., on ward rounds from 1903 to 1905, and edited by his son, William Bennet Bean, M.D.

Many of the observations are familiar, such as "The chief function of the consultant is to make a rectal examination that you have omitted," or "The glutton digs his own grave with his teeth." Some, fortunately, are no longer accurate, as "Pneumonia is the captain of the men of death and tuberculosis is the handmaid." But all make good reading.

This is the book to pick up when the other doctor's receptionist says "Will you hold the line for a minute, please," or you are waiting for the attendants to get your car out of the parking lot during the rush hour. M. E. H.

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED: Locum Tenens for 2 years beginning July 15th or August 1st, 1953. Large, predominantly Catholic general practice with superior hospital facilities and privileges. Opportunity for local practice following. Present physician to enter service but declared essential until can find replacement. One hour by auto from St. Louis. Salary and contract basis range $10,000 to $15,000 yearly net. No initial cash outlay or equipment required. Write Box 228, Union, Mo.

WANTED: Internist: 650-bed, fully accredited State Tuberculosis hospital with complete, modern facilities, located in Midwest, near city of 80,000 population has immediate opening for internist, eligible or Diplomate American Board. Salary $12,000 per annum. Box 188, Mo. State Med. Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

WANTED: Ob.-Gyn. Board eligible graduate of top school to be associated with long established, 8 man group in Central Missouri. 80 bed hospital. Salary open. Partnership early. Reply stating full particulars, first letter, Box 200, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: Young graduate, top medical school. Interested general practice but with sufficient experience to do obstetrics while obstetrician is in service. 8 man group, Central Missouri. Salary open. Partnership after two years. 80 bed hospital. Reply full particulars, Box 201, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: A Board eligible or certified internist from one of best medical schools, fill vacancy in 8 man group in Central Missouri town of 7,000. 80 bed hospital. Practice from territory with 75 mile radius. Salary open. Partnership after two years. Reply stating full particulars re self, first letter, to Box 202, Missouri State Medical Association, 623 Missouri Theater Bldg., St. Louis 3, Mo.

WANTED: General Practitioner, to become permanently associated in long-established general practice, including part industrial work, with older GP not now having assistant, Kansas City, Mo. Terms and arrangements flexible. Write Box 190, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

WANTED—General Practitioner, draft replacement. Pleasant county seat of 1500 in Atchison County, Missouri. Active practice. New hospital 15 miles away. Contact Wallace Carpenter, M.D., Rockport, Mo.

GENERAL PRACTITIONER, young locum tenens for busy general practice. Town 3500, new hospital. Partner entering service. Good chance permanent association when partner returns. Salary open. Write Robert W. Smith, M.D., Marceline, Mo.

IDEAL LOCATION FOR DOCTOR OR DENTIST. Nearest doctor is one and one-half miles away, location in heart of business section, yet adjacent to residential district. Suitable for combination home and office. 1214 North and South Road, University City, Mo. 5 rooms; tile kitchen and bath; garage; basement. Real Estate Management Co., 317 S. 11th Street, St. Louis, Mo. MAin-0952.

WANTED: Staff Physicians: 650-bed, fully accredited State Tuberculosis Hospital, located in Midwest near city of 80,000 population has immediate opening for staff physicians who are graduates of American Medical Schools, who have finished an approved internship or who have finished an approved internship and have had one or more years of experience in tuberculosis or chest diseases: Physician I Tuberculosis—starting salary $6,000 per annum to $9,000 per annum in $500 steps (annually); Physician II Tuberculosis—starting salary $7,000 per annum to $10,000 per annum in $500 steps (annually). Box 189, Mo. State Medical Assn., 623 Mo. Theatre Bldg., St. Louis, Mo.

PHYSICIAN WANTED. Unopposed general practice in farming community 1½ hours from St. Louis. Good office and equipment including X-Ray and Cardiograph. 15 minutes from good hospital. Leaving for service when replacement is found. Write John H. Hooker, M.D., Clarksville, Mo.

HOSPITAL FOR SALE—Doctor retiring after over 30 years of practice in a town of 1,200 in rich agricultural community. Nice surrounding territory. Doctor offering hospital consisting of 4 bedrooms, operating room, office, and reception room in red brick building which is gas heated. If interested, contact B. C. Cole, M.D., Norborne, Mo.

PHYSICIANS WANTED for Missouri State Hospital No. 3, Nevada, Missouri. Salary open according to experience and classification. Modern physicians' homes available. This is a friendly town with good schools and churches. Apply directly to Superintendent.

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

INDEX TO ADVERTISERS

Abbott Laboratories 740, 794-795
Ayerst, McKenna & Harrison, Ltd. 781

Baker Laboratories 797
Bilhuber-Knoll Corp. 741
Blue Cross-Blue Shield 791

Camel Cigarettes 782
City View Sanitarium 805
Continental Casualty Co. 811
Cook County Graduate School 792

Paul B. Elder Co. 776

Fairmount Hospital 807

General Electric Co. 745

Hamilton-Schmidt Company 805

Katz Drug Company 812
Keeley Institute 809
Kent Cigarettes 801
Knox Gelatine Company 808

Lederle Laboratories ..... Insert
Eli Lilly and Company 754

Mead Johnson & Company 816
Medical Protective Company 807
Merck & Company 815
Milwaukee Sanitarium 803

Neurological Hospital 805
Norbury Sanatorium Co. 807
North Shore Health Resort 810

O'Connell Bros., Inc. 809

Parke, Davis & Company 738-739
Chas. Pfizer & Company, Inc. 751
Physicians Casualty Association 810
Mary Pogue School 805

Ralph Sanitarium 799
Research Clinic 803

Sanborn Company 809
Schering Corporation 743
Schieffelin & Co. 808
G. D. Searle & Co. 775
Southern Medical Association 780
E. R. Squibb & Sons 785

U. S. Brewers Foundation, Inc. 807
University of Kansas Medical Center 814
Upjohn Company 747
U. S. Savings Bond 806

West Texas Maternity Hospital 805
Whittaker Laboratories, Inc. 808
Winthrop-Stearns, Inc. 749
Wyeth, Inc. 753

Zemmer Company 805

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in The Journal is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by The Journal when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

POSTGRADUATE COURSES

in

INTERNAL MEDICINE
November 16 to 19, 1953

Guest Instructors:

ALVAN L. BARACH, M.D., Columbia University.
ARTHUR GROLLMAN, M.D., Southwestern Medical School.
W. PAUL HOLBROOK, M.D., Southwestern Clinic and Research Institute.
ULRICH C. LUFT, M.D., School of Aviation Medicine, Randolph Air Force Base.
CARL TEMPEL, Colonel, M.C., Fitzsimmons General Hospital.

OTHER COURSES

ORTHOPEDICS, PHYSICAL MEDICINE & REHABILITATION—3 days, October 26 to 28

GYNECOLOGY—3 days, November 9 to 11

PSYCHOSOMATIC MEDICINE FOR GENERAL PRACTITIONERS—At The Menninger Foundation, Topeka—3 days, December 10 to 12

SURGERY—4 days, January 18 to 21

For program announcement and information, write:

Extension Program in Medicine
UNIVERSITY OF KANSAS SCHOOL OF MEDICINE
Kansas City 12, Kansas

Curiosa et Trivia

William B. McCunniff, M.D.

Eighty per cent of Dalmatian coach hounds die of malignant melanoma.

Consumed per day by attendants at June A.M.A. session, NYC; Coca-Cola 13,000 bottles, Seven-Up 6,000 bottles, Pepsi-Cola 7,000 bottles—(Twelve full ounces . . that's a lot!)

Hormel packing plant at Austin, Minnesota, butchers about 10,000 hogs per day—each of them anesthetized. Advantages, aside from diminished preoperative apprehension: less bruising, more accurate cutting, better bleeding.

In 1950 American druggists filled 389,178,886 perscriptions written by physicians.

News travels fast now? November 8, 1895, Professor Roentgen noted fluorescence of crystals in the beam of a cathode ray; December 28 he submitted data which was published, along with picture of the bones of the hand, the first week in 1896. January 7, 1896 the lay press (Frankfurter *Zeitung*) printed the story. American publication, *Science*, February 14, carried the translation of the original article plus description and pictures of three working units in the U. S.

After performing autopsy, Corsican physician, Francisco Autommarchi, in 1821 reported scirrhous carcinoma of the stomach as the cause of death of Napoleon Bonaparte.

Apparently unfamiliar with alleged "accept one, turn down two" philosophy in regard to medical school applications, 27 out of 29 graduates of small Regis College, Denver, have been accepted for medical school admission in the last six years.

Most common cause of fractures and fracture-dislocations of the talus is airplane crash, where the pilot's foot is firmly placed on rudder bar.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

. . . And Now the H-Bomb!

Arthur S. McDaniel, *Director, Missouri Civil Defense Agency*

Until quite recently, civil defense thinking and planning was geared to the atomic bomb and its effects. With such known factors, the Missouri Civil Defense Health and Medical Services Plan was drawn up by a group of professional and lay people in an attempt to cope with the terrific problems that would result from an enemy caused catastrophe in this state.

Arthur S. McDaniel

This plan is comprised of six elements believed necessary for a well rounded program, as follows:

1. The formation of emergency medical groups which would be mobile units capable of moving into a stricken area on a self supporting basis and take over the care of mass casualties.
2. The effecting of an ambitious emergency blood program, or blood collecting system, in time of disaster.
3. The reinforcement of hospitals in the outstate area to provide continuing care for those persons necessarily evacuated from a target area.
4. The provision for maintaining sufficient local medical service to attend the normal needs of outstate communities.
5. The expansion of the existing public health program to meet attack conditions and combat biological warfare against humans, animals and crops.
6. The establishment of a dispensary service, or turning patient care into a mass clinical operation, to conserve medical talent for treatment of non-attack casualties within a target area.

Now we are faced with the fact that Russia has mastered the secrets of the hydrogen bomb. It is a manifest signal for stepped up preparedness on our part. We cannot hide from this grim threat to our security and our survival. We must not become alarmed or hysterical; neither must we exaggerate or minimize the dangers we face.

The H-bomb is a finite weapon with definite limitations. The basic guidance which civil defense has given the American people for self protection and organized civil defense is still valid. The disaster created by the H-bomb would not be a different kind of disaster—but a larger one.

While the Missouri Civil Defense Medical Plan is still valid, it has become apparent that the physicians and others engaged in healing arts professions in this state must implement this program as soon as possible.

As a free people, we must learn to live with the ever present danger of enemy attack. Should it come, we must be prepared to cope with death and destruction in our cities on a scale undreamed of in any past war. The measure of our greatness will come in whether we let the Russian H-bomb, or any other threat, freeze us in fear and timidity, or whether it arouses us to new heights of personal vigilance and collective security.

We know that the medical profession of Missouri will not let us down.

"Tower of Science"

. . . That marble edifice (Spears Chiropractic Center in Denver) makes the Cornell Medical Center look like Little Abner's shack on the hill top and their array of medical talent, scientific paraphernalia, and know-how in the diagnosis and cure of anything from hog-itch to exotic cerebral disease puts to shame the feeble groping efforts of the Mayo group and of those who struggle toward the light in the Rockefeller Foundation. We wish they would not be so secretive about their methods and pray they may in time offer post-graduate courses to some of us who would like to be able to halt the ravages of some of the mysterious maladies which we know very little about and to which they apparently hold the key.—Allen I. Herman, M.D., *Buchanan County Medical Society Bulletin.*

Pneumonia weather...
the season
for bacterial
respiratory tract
infections

a time
for...

TERRAMYCIN®

BRAND OF OXYTETRACYCLINE

The value of Terramycin in promptly controlling otitis media, severe sinusitis, laryngotracheobronchitis, bacterial pneumonia and virtually all infections of the respiratory tract, due to or complicated by the many organisms sensitive to Terramycin, is now a matter of clinical record.

Because of its excellent toleration and rapid response, Terramycin is a therapy of choice for bacterial respiratory tract infections. Among the convenient dosage forms of Terramycin are Capsules, Tablets (sugar coated), good-tasting Oral Suspension, non-alcoholic Pediatric Drops, Intravenous for hospital use in severe infections.

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

With Our G. P.'s

William J. Shaw, M.D.

The First World Conference on Medical Education, held in London and attended by more than 600 delegates from fifty-nine countries, brought into focus conditions which had been familiar to general practitioners in Missouri for years.

William J. Shaw, M.D.

In an intensive week long conference attended by outstanding medical educators many points were emphasized. Medical practice has changed materially in the last few years. Social medicine, not to be confused with socialized medicine, plays a greater part in the practice of medicine daily. State hospitals, veterans installations, decrease in the number of acute infectious diseases by the use of antibiotics, chemotherapy and immunizations, old age pensions, increased knowledge of psychosomatic medicine and increased life spans with more geriatric problems all combine to change the daily routine of medical practice. As social aspects of the population became more integrated with the practice of medicine the general practitioner was the first to feel the impact of that integration.

Medical education has not evolved to meet the changes in practice. As knowledge was acquired in the various specialties, courses were added to the medical curriculum until it became unwieldy, complex and splintered. In spite of this the medical curriculum has, with few exceptions, continued to adhere to a pattern that was designed in different times and under different circumstances.

If, as has been stated, "The dominant problem facing the medical profession in the second half of the 20th century is the problem of medical education," Missouri is in a unique position. A new medical school has been authorized by the state, avowedly for the purpose of training physicians who will fill some of the vacancies where general practitioners are badly needed. A dean has been appointed who is an able, experienced educator, thoroughly conversant with the present transition in medical education and the needs of general practice.

General practitioners in Missouri, who see the patient as a whole, who know the economic background involved and who had a working knowledge of psychosomatic medicine before it had been defined, can make a definite contribution to the transition in medical education by actively cooperating with those responsible for the construction of the medical curriculum in Missouri.

Crossroads Comment

Peter V. Siegel, M.D.

Dear Uncle Ted:

Not much going on to talk about here at the Crossroads except the weather. We did something about that last week and now we are talking about the rain insted of the drouth. Rain mighty nigh came too little too late. Business is holding up good but collections is about like the rain. Them what was going to pay when they threshed are now saving it up to buy feed for the cows. Yep, it's been rough on farmers, this dry spell, but it's rougher'n a cob on old Doc too since he makes his living mostly offen farmers. Ain't no government relief for me either though it would be sort of nice if Uncle Sam picked up a patients check now and then.

Get to wondering sometimes just what the future is out here at the junction. During the dry spell at times I reckoned there weren't any but I was figgering too far ahead. Living from day to day most often everything works out all right. Reckon none of us take enough time out to count our blessings. Most folks in our generation don't realize what history we have lived through and have been a part of. Most of us can remember two world scraps and the hassel what just let up and been in one or two of them. Most of us remember two cent hogs and two bit wheat and the most prosperous times in history. Since service pay is the most stable commodity known to man many of us were born at the wrong time and just missed making our wad. Looking backards scares me worsen looking forard. Since it had to happen I wouldn't miss it for a million bucks but a lot of it never again—I hope!! After seeing how a lot of people exist the way they have to in other countries makes me count my blessins again and again.

So Uncle Teddy, I ain't hankering to make any changes. Gonna stick right here with my general practice. And when they really do invent a drug that will nip cancer in the bud theres gonna be an awful lot of surgeons wishin' they knew a little bit more about being a family doctor.

Yep, if I had hay piled as high as my blessin's my old cows would have a mighty prosperous winter ahead.

Your country nephew,
Pete

Meat...

and the Important Role of Protein in Hemoglobin Synthesis

Although the relationship between iron and hemoglobin formation is widely appreciated, the important role played by protein in hemoglobin synthesis is relatively obscure. Nevertheless, since globin is just as much a component of the hemoglobin molecule as is iron, the continued synthesis of this protein is necessary for normal hemoglobin production.

It has recently been estimated that in the average adult 8 Gm. of globin is destroyed daily.[1] This means "that approximately 14% of the total dietary protein intake of the average adult [female] is required solely for the resynthesis of new hemoglobin. These data reemphasize the importance of adequate protein, as well as iron, intake for the maintenance of a normal rate of hemoglobin synthesis in man."[2]

Because meat is an outstanding source of *both* iron and high quality protein, it is always recommended in generous amounts in the dietary management of hypochromic anemia. These nutritional values, as well as its significant content of B vitamins, also make meat an important component of the daily diet of normal persons.

---

1. Drabkin, D. L.: Metabolism of Hemin Chromoproteins, Physiol. Rev. *31*:345 (1951).
2. The Biosynthesis of Hemoglobin, Editorials, J.A.M.A. *150*:1223 (Nov. 22) 1952.

The Seal of Acceptance denotes that the nutritional statements regarding meat made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago... Members Throughout the United States

What Is Your Hobby, Doctor?

Which Hobby?

Kept awake by indigestion one night after dining out, Mark M. Marks, M.D., Kansas City, decided to improve on the condiment situation. Without consulting anyone, he did just that: He produced a seasoning with just the right tang . . . without any "burpy" hangover!

This is but one facet of a fellow member who has many sides, stimulated, no doubt, by the

insight he gained as a lapidary. For, in the field of semiprecious stones, he is considered somewhat of an expert, and his technical "know how" enables him to polish and bring out the many beautiful qualities of a stone.

But, to get back to the beginning: in his own words, he has been intrigued ("since I was in short pants"), with ceramics. "I even dug my own clay before I knew you could buy it." This interest has held him, even up to his present, and most important, work.

Athletic pursuits have come naturally to Dr. Marks. Swimming, wrestling, handball—all were majors in his extracurricular physical activities. As a swimmer at Washington University, as a Judo coach in the service, he was a standout. But he insists he likes handball best. In all of these he has exemplified two overwhelming qualities: an insatiable curiosity and an indomitable spirit to excel.

Actually, as a taxidermist with the Department of Agriculture (at Oklahoma University), and with famous Shaw's Botanical Gardens in St. Louis, he started to study geology. This led to his work in semiprecious stones. With this background, potentiated by his primary love of ceramics, his present anatomic moulages came as a natural eventuality. This was further occasioned by the desire to know more about the action of barium "turning into rocks in my patients."

His moulage studies of anatomy have been displayed at meetings of the International College of Surgeons and leading Proctological Associations as well as at many other medical technical displays. His reproductions of uteri, breasts, and colons cause students and old timers alike to gasp at their naturalness. His future dream *arbeit* is a text on medical illustration.

While he dabbles at this major hobby, he invents musical themes, *Viegenlieder* for the children, or oriental (*a la* Yma Sumac, of the 5-octave voice) motifs!

His greatest thrill up to now, he avers, is the three years he spent in occupational therapy at Camp Crowder teaching Judo, leather working, weaving and bookbinding.

In telling of all these hobbies of Dr. Marks, we almost forgot—he can cook, too!

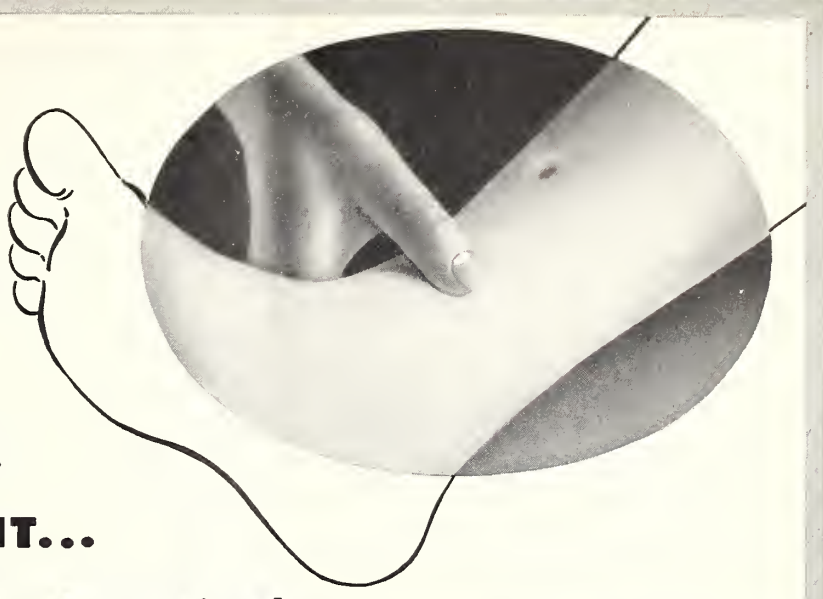
(We would appreciate information concerning other members with unusual hobbies. V. T. W.)

Less Talk, More Medicine

. . . So, what's all the shouting about? Why put ourselves on the defensive? Why become engaged in a senseless scramble for security? Let's continue to improve our technics to create new and better methods of treating the sick, to continue to revive the old practices that have proven beneficial down through the ages, to use our talents in the best possible manner, to carry on the fight for a healthier nation, without so much nonsensical ballyhoo.—News & Views, *St. Louis Academy of General Practice Bulletin.*

Nurses Are People

. . . and the same social forces that operate in the lives of other people affect nurses....These goals (40 hour week, increased salaries)...might not have had to be fought for so vigorously if hospitals had been more alert to the human factor in their administrative policies. Nursing keeps its Florence Nightingale tradition...but the old master-servant relationship of hospitals to nurses has changed in favor of human understanding, and properly so.—Sister Mary Augusta, St. Francis Hospital, Cape Girardeau, *Kansas City Star.*



TO DRAIN THE EDEMA PATIENT...

Effectively • Conveniently...

SALYRGAN®-Theophylline

MERCURIAL-XANTHINE DIURETIC

Solution • Tablets

FOR EDEMA due to cardiovascular and renal insufficiency, as well as hepatic cirrhosis

By a dual action on the kidneys which both increases the volume of the glomerular filtrate and diminishes tubular resorption, Salyrgan-Theophylline rapidly produces copious diuresis.

The response to Salyrgan-Theophylline solution does not "wear out" so that doses may usually be repeated as required, without loss of efficiency.

With Salyrgan-Theophylline tablets taken orally, patients appreciate the gradual, non-flooding diuresis and the greater convenience. Salyrgan-Theophylline tablets "can successfully decrease the patient's burden... either by decreasing the need for frequent mercurial injections or by actually replacing the injections entirely."[1]

WINTHROP

1. Abramson, Julius, Bresnick, Elliott, and Sapienza, P. L.: *New England Jour. Med.*, 243:44, July 13, 1950.

Winthrop-Stearns INC.

NEW YORK 18, N.Y. WINDSOR, ONT.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Salyrgan, trademark reg. U. S. & Canada, brand of mersalyl

Our Auxiliary

Mrs. C. Alex (Helen) McBurney, *President*

In the president's message of the August issue of the national *Bulletin*, Mrs. Leo J. Schaefer said, "We will continue to build on the program of former years and reevaluate it according to present day needs. The exigency of the times changes our viewpoint, but fundamentally our work remains the same. High on our agenda remain the nurse recruitment program, Future Nurses Clubs, voluntary health insurance, civil defense, health legislation, community councils, rural health, mental health, health days, health institutes, *Today's Health,* American Medical Education Foundation and still other projects, such as cancer, polio, heart, cerebral palsy and the Red Cross blood program. Knowledge concerning the American Medical Association, its councils, bureaus, and committees, the World Medical Association and the World Health Organization must be basic. Each auxiliary, large or small, can select the part of the program most needed in its home community. One new *Bulletin* subscriber, one new *Today's Health* subscription, one small donation to the A.M.E.F. from each one of you, multiplied by 65,000 members, would bring unbelievable results. Try it and feel the personal satisfaction from your individual efforts. Together We Progress."

In the July issue of Missouri Medicine some of the names of the officers were listed. The following completes the list of officers and committee chairmen. The names of the county presidents will be given in a later issue of Missouri Medicine.

President, Mrs. C. Alex McBurney, Slater; president-elect, Mrs. W. E. Martin, Odessa; 1st vice president, Mrs. Norton J. Eversoll, St. Louis; 2nd vice president, Mrs. Robert Duncan, Springfield; 3rd vice president, Mrs. Guy Magness, University City; treasurer, Mrs. Frank B. Leitz, Kansas City; recording secretary, Mrs. Victor B. Buhler, Kansas City; corresponding secretary, Mrs. Ralph Jones; auditor, Mrs. H. C. Bauman, Maryville; parliamentarian, Mrs. W. L. Allee, Eldon; 1 year directors, Mrs. T. L. Dwyer, Mexico, Mrs. Guy Everist, Rolla, Mrs. A. W. Hanss, Springfield, Mrs. Harold Ridings, Cape Girardeau, Mrs. J. Logan Mayfield, Washington; 2 year directors, Mrs. A. S. Bristow, Princeton, Mrs. Ralph Bohnsack, Brookfield, Mrs. Theodore Greiner, St. Louis, Mrs. S. P. Simmons, Marshall, Mrs. William B. Allen, Kansas City; chairmen of committees, American Medical Educational Foundation, Mrs. A. B. Jones, St. Louis; Archives, Mrs. W. E. Martin, Odessa; *Bulletin,* National, Mrs. E. A. Belden, Jefferson City; *Bulletin,* Quarterly, Mrs. Charles T. Shepherd, Clayton; Circulation Manager, Mrs. John J. O'Connell, Overland; Civil Defense, Mrs. Delon A. Williams, Kansas City; Courtesy, Mrs. C. V. Wilcox, St. Louis; Finance, Mrs. A. J. Crider, Dixon; Legislation, Mrs. J. L. Washburn, Versailles; Medical Student Loan Fund, Mrs. J. B. McCubbin, Fulton; Membership-at-large, Mrs. E. A. Kibbe, California; Nurse Recruitment, Mrs. Elvin D. Imes, Maryville; Organization, Mrs. Norton J. Eversoll, St. Louis; Press and Publicity, Mrs. Ralph Jones, Sweet Springs; Program, Mrs. Martyn Schattyn, Kirkwood; Public Relations, Mrs. Harry C. Wall, Mission, Kans.; Radio and Television, Mrs. Robert Bristow, St. Joseph; Revisions, Mrs. Dwight T. Van Del, Kansas City; *Today's Health,* Mrs. J. S. Summers, Jefferson City; *Today's Health* A.M.A. Regional, Mrs. H. M. Gilkey, Kansas City; Advisory Council, Drs. V. B. Buhler, Kansas City, H. M. Gilkey, Kansas City, and Jean J. Merz, St. Louis.

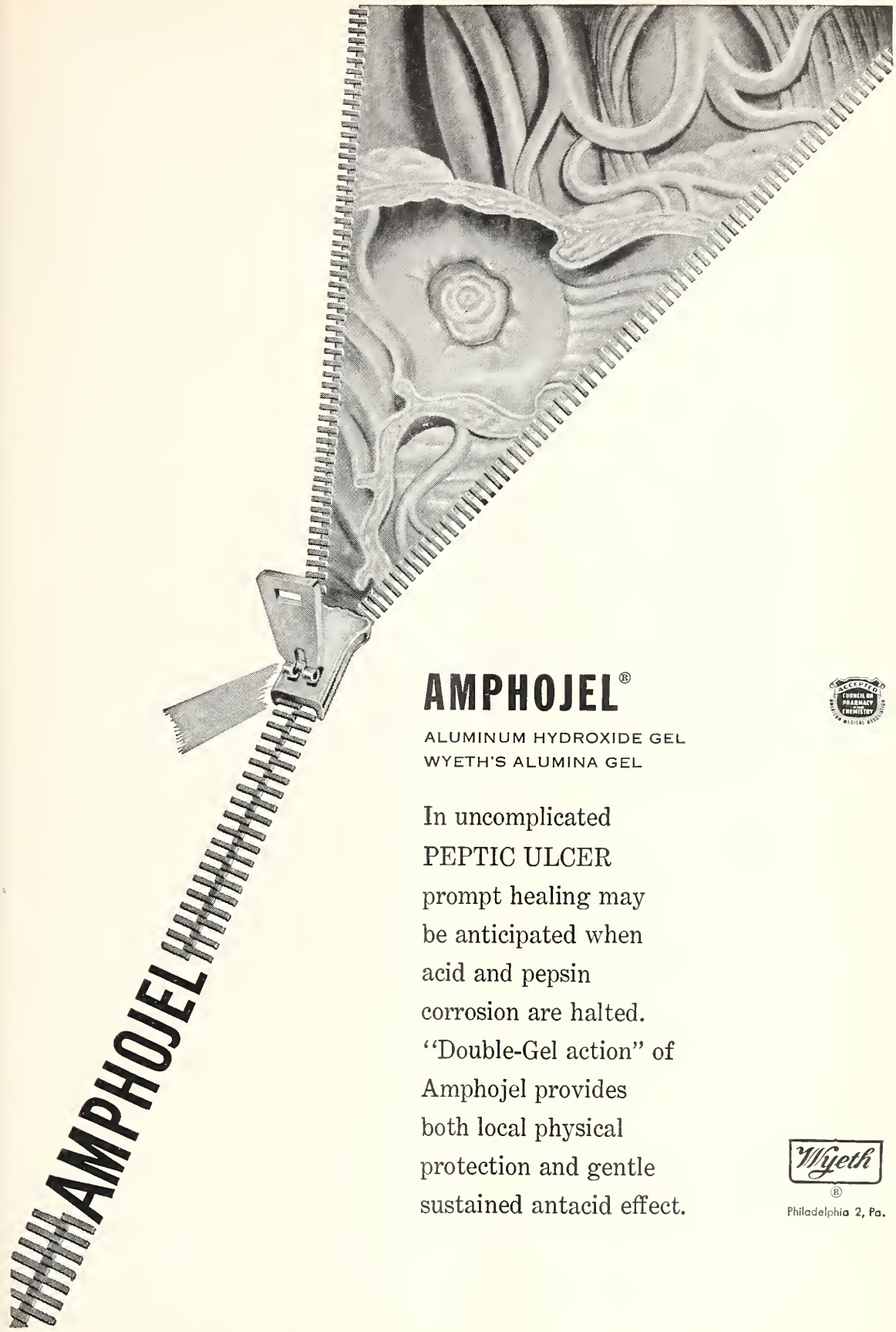
Of This and That

Mark M. Marks, M.D.

While in the company of a group of fellow doctors, we fell to talking about the thrills of our student days when first we explored the mysteries of medicine. Many spoke of their feelings when they were assigned their cadavers...a curious mixture of wonder and revolt. Nearly all described one scene or another that had fixed itself indelibly in their minds, and they seemed to glory in the retelling of them.

As for me, two episodes remain as exquisite bits of pleasure. The first was simple enough. I compounded a cough prescription in pharmacology that looked and tasted better than I had expected, and I even persuaded a fellow student to take it for his bronchitis. I cannot remember the first ether anesthetic because, huddled as we were in those day over the masked patients, we got nearly as much anesthetic as they.

The second sharp memory is the time when, as a junior student, I went along on my first delivery with a senior who left me to "watch" while he departed for a few minutes. By the time he returned, hours later, I had officiated at the delivery of twins in a somewhat benumbed manner. He has not been friendly since...as if I had done it purposefully. I'll bet you could tell a few.



AMPHOJEL®

ALUMINUM HYDROXIDE GEL
WYETH'S ALUMINA GEL

In uncomplicated PEPTIC ULCER prompt healing may be anticipated when acid and pepsin corrosion are halted. "Double-Gel action" of Amphojel provides both local physical protection and gentle sustained antacid effect.

Wyeth®
Philadelphia 2, Pa.

Missouri Medicine in Review

Leo H. Pollock, M.D.

NOVEMBER 1913

All members are informed that the state assessment for 1914 will be $3.00 each. Those who have not paid their dues for 1913 are delinquent....A decade ago St. Louis had many more medical schools than it has now, yet there were practically no men who made a business of teaching medicine, save as a sideline. Then St. Louis University, having taken over the Marion Sims-Beaumont School of Medicine, attempted what seemed a radical step... organized the first two years of instruction on a real laboratory basis, with full time paid men at the head of fundamental departments. Two of these were biologists and, moreover, teachers. Opinions of this heresy were freely expressed. E. P. Lyon and A. C. Eycleshymer brought with them to St. Louis the research spirit—they were investigators, their laboratories were workshops.

Dr. Geo. H. Jones appointed state bacteriologist. Dr. Murray C. Stone, who formerly held that position, moved from Jefferson City to Springfield to conduct a pathology and bacteriology laboratory.

Dr. Hanau W. Loeb of St. Louis elected dean of the St. Louis University Medical Department. The State Board of Health revoked for eighteen months the license of Dr. Edward Andrus of Holden, for sending illegal literature through the mail.

NOVEMBER 1928

St. Louis *Post-Dispatch* editorial: "The Franklin County poison cases are a well-nigh incredible example of the breakdown of county justice. Over a period of 18 years, Mrs. Bertha Gifford has been playing...volunteer nurse, and in that time 17...have died suddenly following her ministrations. The last suspicious death occurred in May, 1927. Only within the last few weeks has the law begun to perform its function of investigating and punishing what looks like wholesale murder. Mrs. Gifford is in jail and has confessed feeding arsenic to three of her deceased 'patients.' Perhaps the primary cause of this situation lies at the door of the physicians called in to attend Mrs. Gifford's cases...through timidity, lack of initiative, and 'neighborly feeling,' they failed to divulge their suspicions to the authorities. They issued death certificates in the cases with such notations as 'acute gastritis, cause unknown,' and other vague and meaningless phrases. They failed to insist upon postmortem examinations. It has been a lamentable exhibition of professional cowardice and neglect of duty."

A $50,000 trust fund to be divided between St. Louis Children's Hospital and Washington Univercity was provided in a codicil to the will of Joseph D. Bascom, St. Louis rope manufacturer.

NOVEMBER 1943

"Even if it should become legal to add vitamins to alcoholic beverages, physiologic consideration would incline to make such formulas undesirable," the *Journal of the American Medical Association* says, in reference to the stability of vitamins in whiskey. "...regulations make it illegal...nevertheless, the fact that many of the diseases associated with chronic alcoholism are due primarily to deficiencies in vitamin intake...make information on the stability of vitamins in whiskey of more than academic interest. A. F. Novak and S. L. Adams investigated...by fortifying...86.8 proof whiskey with riboflavin, thiamine and nicotinic acid...assays showed that riboflavin is unstable in whiskey...but that loss of thiamine or nicotinic acid had not occurred and that these members of the vitamin B complex appear to be stable in whiskey."

Capsule Clinics

Irving A. Wien, M.D.

- Branchial cysts should be completely excised, and, since there is little adherence to the surrounding structures, these procedures are usually quite simple. Thorek, P.: Anatomy in Surgery, J. B. Lippincott Co., Philadelphia, 1951.

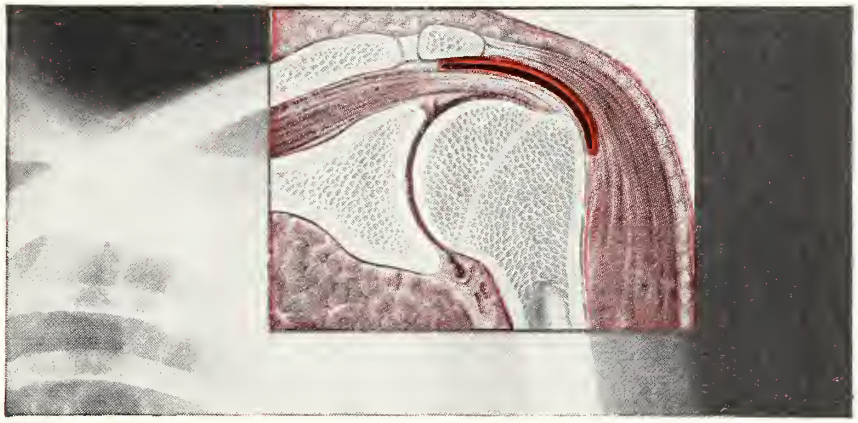
- Oral and pharyngeal cavity tumors may reach a size of 2-3 Cms. without producing any disability such as pain, hemorrhage, or difficulty in eating. In fact very often in such a setting, the first indication that something is wrong is the appearance of a lump in the neck. Morfit, H. M.: Am. Practitioner 4 (March) 1953.

- Low voltage x-ray therapy is an effective means of treating many of the hemangiomas and results in excellent therapeutic and cosmetic effect. Wilson, W. W.: South. M. J. 46 (May) 1953.

Dramatic results with *HydroCortone*®

(HYDROCORTISONE, MERCK)

in Bursitis



Tablets of HYDROCORTONE afford rapid, even spectacular relief in most cases of bursitis. Oral therapy is effective, convenient, and well tolerated.

In acute bursitis, Saline Suspension of HYDROCORTONE Acetate, injected directly into the bursa, is of great value. Relief of pain and increased mobility have occurred within a few hours in many patients treated with economical low doses.

HYDROCORTONE *is the registered trade-mark of Merck & Co., Inc. for its brand of hydrocortisone.*

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

© Merck & Co., Inc.

President's Comments

The American Medical Association Clinical Session will be held in St. Louis, December 1-4, 1953, at the Kiel Auditorium. An outstanding scientific program, including colored television, will be presented. The House of Delegates will be in session at the same time, considering matters of interest to all members of the profession.

Perhaps, it is too much to hope that all physicians in Missouri will attend this meeting. Surely, however, the great majority will take advantage of this opportunity to be among those present at this outstanding event in our home state.

Eblaude Bohrer

Progress Notes of Prepayment Plans

Missouri Medical Service—St. Louis Blue Shield

Missouri Medical Service (St. Louis Blue Shield Plan) on November 1 will make improvements in it Doctor's Service Report form and procedure designed to speed up payment of subscribers' benefits to participating physicians and simplify the doctors' paper work.

Missouri Medical Service, which is sponsored by the Missouri State Medical Association, estimates that the new system will cut upward of a week from the time now required for servicing benefits for hospitalized bed patients and payment on medical-surgical bills.

Blocks of new Doctor's Service Report forms have been supplied for use in the offices of the plan's 2,825 participating physicians. The doctor is to fill out the form immediately upon the conclusion of surgical procedure or in medical cases immediately upon the patient's discharge from the hospital. The form folds and seals into a self mailing envelope addressed to Missouri Medical Service.

Under the new procedure the doctor himself will initiate from his office the processing of the Doctor's Service Report which is the first and most important step toward Blue Shield's payment on medical-surgical bills. This is a pronounced change from the old system, in which Blue Shield sent a Doctor's Service Report to the physician for each case after receiving a patient's admission notice from the hospital.

The new method will enable Missouri Medical Service to start processing the Doctor's Service Report immediately upon its receipt from the physician, so that, when the Blue Shield organization receives the hospital admission notice, it can promptly conclude the handling of the case. This change should result in a time saving of from a week to ten days.

The new Doctor's Service Report form has been extensively revised. The most important change is the inclusion of questions to provide the Blue Shield plan with all needed information on medical cases. The old procedure had necessitated sending a supplemental form for such information. The new consolidated form will accelerate payments and reduce doctors' paper work.

BOOK REVIEW

Histopathological Technic by Aram A. Krajian, Sc.D., and R. B. H. Gradwohl, M.D., Second Edition C. V. Mosby Co., St. Louis. 1952. Price $6.75.

The present volume is the second edition of this handbook of histologic methods and technics. It is not intended as a reference text but rather presents in step-by-step fashion specific directions concerning all the presently used methods in microhistologic technic. In addition to the standard accepted methods, numerous original and modified methods are included. The book stresses methods that the authors "have found most rapid, economical and practical." The volume is divided into several sections as follow: tissue fixation, equipment for section cutting, methods of section making, staining solutions, clearing reagents, mounting reagents and staining methods (standard and differential). In addition, sections are included on botanical microtechnic and histopathologic methods of the central nervous system, each written by specialists in those fields. Also included is a section of miscellaneous methods dealing with preparation of museum specimens, glassware cleaning methods and solutions. A new section on use and care of microtome knives, written primarily for the medical technologist, is incorporated.

Many photographs (chiefly in black and white) are presented. Most are quite adequate, although several of the photographs included could have been omitted without detracting from the value of the book. Seven color plates, dealing chiefly with special staining methods, are presented. The text is easily readable and a complete index is added. This is a good hand book of histopathologic technic. E. B. P.

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 November, 1953 Number 11

CHEST INJURIES: DIAGNOSIS AND TREATMENT

RALPH A. DORNER, M.D.
DES MOINES

CHEST INJURIES require a special knowledge for proper treatment since the disturbed physiology accompanying an apparently rather minor wound may result in death if not properly handled. An analysis of 11,000,000 English, French, American and German wounded in World War II revealed only 6 per cent had chest wounds, but of the total mortality of eight per hundred, 56 per cent died from chest wounds.

With the ever increasing incidence of injury due to transportation and industrial accidents and because of the impending threat of war, it behooves every physician to be prepared to give early, adequate and intelligent care to the injured. Obviously other injuries frequently accompany trauma to the chest. One must therefore use judgment in regard to treating "the patient" rather than some particular "part of him." Except for a few urgent conditions necessitating quick action, conservatism is to be recommended in contrast to over-treatment. This would involve the administration of antibiotics, blood, oxygen and other medications as indicated, along with emergency care so that shock might be overcome and the patient's condition be stabilized before giving definitive care to multiple fractures and other wounds. There are thus only a relatively few conditions necessitating prompt action. I shall enumerate some of the more common chest injuries with which the majority of the doctors here may be called upon to deal.

Simple Fractures of Ribs.—The fracture of a single rib usually causes only its resulting pain. However, unrelieved pain from a simple fracture of a rib in a patient with bronchiectasis or some other suppurative disease of the lung may result in reflex control of cough and limited respiration to such an extent that that patient may develop pneumonia or develop serious oxygen want. As the number of fractured ribs increases, such dangers are multiplied.

The first procedure to carry out for fractured ribs is therefore relief of pain to prevent the reflex filling up of pulmonary secretions, and to allow coughing so that accumulated secretions may be eliminated.

The time honored technic of adhesive strapping is fast falling into discard. One may test by pressure against the chest whether strapping might be of benefit. It must be remembered that the jagged fracture ends may be driven into a lung and result in hemorrhage or pneumothorax or both. In some patients, circular taping (which is the only truly effective technic) may seriously decrease the patient's vital capacity. Because of the immobilization of the chest, atelectasis or pneumonia or both may occur. Because of the ineffectiveness of the strapping in many cases and because of undesired effects in a high percentage of cases, it is recommended that paravertebral and intercostal nerve blocks be performed to eliminate the pain associated with fractured ribs.

Technic of Injection—The purpose of injections is to block a sufficient number of intercostal nerves related to fractured ribs as well as a nerve or two above and below the sites of fracture so that pain will be greatly decreased or eliminated. Injections at the angles of the ribs (only a few inches from the vertebrae) are to be preferred. However in many cases the patient cannot be turned or set up to expose this area. In these cases injections at the posterior axillary line will give marked relief. Care should be exercised not to tear the pleura or lung. After skin preparation, wheals are made in the skin over the ribs of the nerves to be injected. A long No. 20 needle is then pressed inward until the rib is contacted. It is then withdrawn about one centimeter and then angulated downward to pass into the intercostal muscles just below the rib edge for about one millimeter's distance. Aspiration is attempted to eliminate the possibility of having entered the pleural cavity or a blood vessel and then 5 cc. of 1 per cent novocain (without adrenalin) is injected. This procedure is repeated for each rib involved and for one or two ribs above and below the fracture sites. If hematomata develop at fracture sites, secondary injections may be made

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

there. Usually a repeat injection in from twelve to twenty-four hours will be sufficient to control the patient's pain; by this time sufficient hemorrhage at the fracture sites has occurred to cushion the rib ends.

Multiple rib fractures may result in a flail chest. With this, early emergency care must be given to overcome the resulting paradoxical motion. In this condition, the affected side moves inward during the act of inspiration and outward during the act of expiration. Thus, alveolar air is exchanged from one lung to another with resultant depletion of oxygen and increasing carbon dioxide. It becomes imperative to stop this cycle by immobilizing the chest wall. This may first be done with one's hands while the patient has a chance to renew normal exchange of gases. Then one may apply well padded snug dressings in expiration. Sand or shot bags lain carefully against the chest will also be of help. Complete circular wrapping of the chest for this condition has been recommended by Jensen.

In cases of bilateral fractured ribs, often associated with fracture of the sternum, a so-called "stove-in chest" results. With the bilateral flail condition, respiration rapidly fails. The previously mentioned technics for the unilateral flail chest are ineffective in this condition. One must act rapidly to hold out the chest so that the lungs can carry on gaseous exchange. The use of towel clamps or uterine tenaculi grasping the flopping ribs or sternum and holding them with traction from overhead apparatus has been effective. In some cases more than one site of outward traction may be indicated. Numerous patients who otherwise would have died are now being saved by such a procedure.

One must keep in mind that all chest injury cases require careful and repeated observation and the best in nursing care. The physician can learn much by physical inspection. Sometimes the patient is in too poor condition to be lifted or turned for x-rays. And frequently quick action based on physical examination will turn tragedy into success. This is true as indicated in the control of paradoxical motion and also in the treatment of pneumothoraces and hemathoraces. A pneumothorax may result either from (1) a laceration of a lung (or a bronchus)—a so-called "closed pneumothorax"; or (2) a penetrating wound of the chest wall—"open pneumothorax." Frequently in the open pneumothorax the chest wound is such that it acts as a ball-valve mechanism—a so-called sucking wound—allowing more air to enter the chest cavity than escapes. In lung lacerations the pneumothorax also increases. This results in collapse of the lung, a shifting of the mediastinum toward the unaffected side and compression of the "good" lung. Physical examination will show tracheal shift; the point of maximal impulse of the heart will be shifted; percussion note will be hyperresonant (except where blood is present to cause dulness), and breath sounds will be tubular to absent (depending on the degree of compression). Subcutaneous emphysema may be associated due to escape of air into the subcutaneous tissues. The patient's condition may deteriorate rapidly if this pneumothorax is not relieved. Closure of the sucking wound with a massive snug dressing is imperative. Vaseline strips are effective in making an air-tight seal. Then the release of air from the pleural space should be carried out rapidly. I prefer the use of the needle-trochar devised by Claggett but a blunt needle or a small urethral catheter threaded through an intercostal trochar is used by many men. One should immediately connect the needle or catheter to a water-seal. I will illustrate our system of water-seal.

In many chest injuries, bleeding of considerable magnitude occurs—either from the lungs, intercostal or internal mammary vessels or from other structures. In these cases the shock must be treated first by the use of intravenous fluids, preferably whole blood. I have often considered the use of autotransfusions by aspirating blood and citrating and straining it and restoring it to the patient. Certainly this should be done if one is not fortunate enough to have a bank blood immediately available. Restoration of pulmonary physiology goes hand in hand with the treatment of shock. Oxygen therapy, either via catheter or by mask, should be used in any serious chest injury. Eight liters of oxygen per minute should be administered early in all severe chest injuries. Do not wait for cyanosis to appear before giving oxygen. Aspiration of blood from the chest cavity without allowing air to enter should be carried out as soon as possible and as completely as possible. In most cases of hemorrhage from the lung, bleeding stops if the lung is reexpanded and kept expanded. Thus, in most cases the practice of thoracotomy for the control of bleeding is not indicated. A recent stabbing case whom I treated was in profound shock from bleeding, apparently from intercostal vessels. By the time she had received about 1,500 cc. of blood and we had aspirated almost this much from her chest cavity, she had come out of shock, remained stable and showed no indication of further bleeding.

During World War II we "allowed the chest cases to stabilize" before removing their emergency dressings and operating on their sucking wounds and other injuries. The shell fragments and bullets within lung substance were removed at later operations. It is urgent that the chest cavities be aspirated dry—and kept dry—in order to prevent clotting and fibrosis of old blood. Thus the necessity of decortication of an immobilized lung can be prevented. If clotting occurs—as is seen in about 10 per cent of hemothoraces—streptokinase and streptodornase may liquify the clotted blood and eliminate the necessity for surgical decortication. This drug must be used early before a peel of fibrinous material has been laid

down or it will be ineffective in completely eliminating the exudate holding the lung down.

In crushing injuries of the chest, cardiac damage may result. Thus, repeat electrocardiograms should be obtained and if changes show up as time elapses, one should treat the patient as a myocardial infarction since not infrequently rupture of a heart chamber has occurred after a patient appeared to have recovered from his chest injury.

I should like to mention two complications associated with chest injuries which are best treated by prevention; namely, gastrectasis and paralytic ileus. I would recommend the insertion of a gastric suction tube early in the treatment of any severe chest injury to forestall these complications.

Suction of the pharynx and of the tracheobronchial tree should also be carried out at frequent intervals. If a patient is unable to raise his secretions, bronchoscopy should be done. And then, if he continues to have further trouble, tracheotomy should be performed before his condition becomes desperate. Tracheotomy has been a life-saving procedure in patients with marked respiratory distress from crushing injuries to the chest. The patient's respirations become surprisingly easier; paradoxical motions are markedly decreased and, of course, the deliverance of blood and secretions from the tracheobronchial tree is greatly facilitated.

In all chest injuries I would advocate judicious use of morphine to control pain (along with novocain injections). It is my feeling that this is a better drug than codeine, demerol or other opiates.

Rather briefly I have tried to cover the treatment of chest injuries. I would like to emphasize that the treatment resolves itself around maintaining an adequate airway and restoring as much as possible normal cardio-respiratory physiology.

604 Locust St.

In the Spotlight

One of the greatest developments of the last few years is the rediscovery along the medical pathways of American that the g.p. is an individual and must be treated as such, and that if he is treated as such, he will respond to treatment. The general practitioner, whether he likes it or not, is a kingpin in the age of human relations. If he meets the challenge of the new era, he will not go unrewarded. He will command an increasing share of respect from the medical profession as a whole.—News and Views, *St. Louis Academy of General Practice Bulletin.*

Pettis P.R. Man

Dr. Pete Siegel has always been an advocate of better public relations for the Medical Profession, and (there is) evidence that he practices what he preaches. Keep it up, Pete. The P.C.M.S. is proud of you.—*Pettis County Medical Society Bulletin.*

PEDIATRIC EMERGENCIES

SYDNEY S. GELLIS, M.D.
BOSTON, MASS.

In recent years more and more attention of doctors, parents and health organizations has been turned to the problem of accidents as the cause of deaths of children as well as adults. According to the Metropolitan Life Insurance Company, the number of accidental fatalities in the United States in 1951 was 97,500—an increase of 5 per cent over the previous year. Motor car accidents caused 37,500 deaths, industrial accidents 16,500, accidents outside the home unassociated with the automobile 16,000 and home accidents 27,500. The National Safety Council gives the following ratios for fatal to nonfatal accidents many of which caused permanent disability: Automobile 1:39, industrial 1:123, accidents outside the home unassociated with the automobile 1:125, and home accidents 1:145. Accidental deaths have in just a few years become the leading cause of death in children in this country since the decline in mortality rates of such diseases as pneumonia, meningitis and contagious diseases, as a result of chemotherapy, antibiotics and large scale immunizations. At present, accidents account each year for more deaths in children than the six most common causes of death combined.

Hence the need of examining more closely methods of reducing accidental deaths. Just as physicians have sought ways and means of preventing infectious diseases such as rheumatic fever, it is vital that they seek out the prevention of accidental deaths. They cannot look to public agencies alone to accomplish this; each physician is responsible for the education of families under his care in thinking in terms of accident prevention.

Physicians generally have been extremely lax with regard to this entire problem and the initiative should be taken by them as a group to emphasize to parents the need of increasing attention to these unnecessary causes of death. Drives for funds for poliomyelitis, cerebral palsy, muscular dystrophy and tuberculosis are part of daily life, yet little attention is given by both the medical profession and the public to the need of drives which will bring home to parents the fact that accidents are the number one killers of our children. The insurance companies have been more aware of the entire aspect of accident prevention than any medical group and have done most to publicize the importance of accident prevention; it is high time that the physician, as he watches rheumatic fever decline, deaths from whooping cough, measles, and scarlet fever fall, meningitis of all types yield to modern therapy, assumes the lead in education of the public in the importance of accidents and methods of their prevention.

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

Dietrich has done a great deal in this country in his efforts to arouse physicians to the need of thinking in terms of accident prevention. He points out that the critical period of a child's life as far as accidents are concerned is from birth to 5 years and it is during this period that parents must be taught to immunize their children to accidents just as the doctor is immunizing them against contagious diseases. The infant from birth to the first year is nonambulatory and so is primarily subjected to injuries inflicted by the parents. Burns, falls, poisons and drowning in that exact order are the chief accidental causes of death during this year. In the 1 to 2 year group, burns fall into third place so that the order of importance is drowning, poisoning, burns and falls. During the 2 to 3 year period, drownings still hold first place, burns attain second place, poisons third place and falls fourth place. In the third to fourth year in order of importance are burns, drowning, poisons and falls. During the fourth to fifth year deaths are caused by burns, drowning, falls and poisons in that order. It is pointed out that if the complete protection tendered the child during its first year of life were continued, the child who suffered no accidents would be extremely vulnerable subsequently to accidents. Thus the age 1 to 5 years is the critical one for training and immunization. During the first year the bath is made delightful for the infant; everything is done to encourage his liking for water. This may partly account for the rise in drownings to first place as a cause of accidental death between the ages of 1 and 3 years since the child has developed no fear of water. The essential point to stress in this critical age group is guarding against overprotection; the child should be allowed to get into difficulties while under supervision. I feel that it is unnecessary and somewhat drastic to go as far as Dietrich proposes for immunization of the infant against accidents: putting warm objects in the infant's hand—even to the extent of touching him quickly with a lighted cigarette, letting him slip momentarily under water in the tub with some resulting gasping and sputtering so that he will learn respect for water; when he starts crawling about and attempts to eat things out of jars, leaving a jar of mustard within his reach to put an end to such practices. It is unnecessary to go to such extremes; if the child is not overprotected he will cope quickly with these dangers.

It is my purpose today to discuss accidents in the home and the responsibility of physicians and hospitals in the prevention and care of such accidents. Since time is limited I shall discuss medical emergencies arising within the home. A good illustration of the role played by the community hospital in the education of the public along these lines is the little accident handbook which has been distributed and which is the result of the efforts of the combined staffs of the Children's Hospital in Boston. The booklet is tabbed so that the parent may turn quickly to the section which he needs; there is a total of eight sections, namely: Head Injuries, Burns, Poisons, Cuts, Fractures, Bites, Convulsions, and Foreign Bodies. The language is simple and to the point. On one side of the page are listed the things to do, on the other what not to do. Too many home medical books are wordy and confusing to the excited parent who has no time to wade through paragraphs of material. In addition to these sections there is a page listing simple home remedies which should be kept on hand to enable one to cope with the types of accidents listed, and perhaps most important of all there is a check list which enables a parent to survey his home from the standpoint of safety. I hope that all will review the check list carefully to see just how safe your own home is for children. Finally, an attached string makes it possible to fasten the booklet on or near the phone. On the back cover there is room for the telephone numbers of physician, hospital, fire department, police department, druggist.

It would be most helpful if the physicians of every community could make themselves responsible for issuing similar handbooks to further the campaign to reduce needless deaths. Such booklets might be issued by the local medical societies.

The section of the handbook which I should like to emphasize today is the one on poisons. Poisons account for a total of 5 per cent of fatal home accidents and more than one-third of these occur in children under the age of 5 years. Parents only too often may show great concern over the contents of the medicine chest but pay no attention to the cleaning solutions and bottles stacked in the cabinets in the kitchen, most of which are within easy reach of a toddler. In addition, many of the commonly used drugs are no longer regarded by the public as drugs and therefore potential poisons. Aspirin is employed so commonly that bottles of the tablets are left lying around, thus accounting for many cases of fatal salicylate poisoning. The same is true of aspergum or feosol tablets which, in the last few years, have accounted for an increasing number of accidental deaths. Vitamins, essential for optimum growth of children may, when taken in excess, prove to be dangerous poisons.

The child who chews on all types of objects requires special attention—lead paints must never be used on cribs, window sills or toys for fear of lead poisoning. Crayons may, when eaten, cause aniline poisoning. Dirt consumed from the yard outside the house may be responsible for ascariasis or liver damage with eosinophilia due to migrating larvae of canine ascaris. In thinking of potental poisons and drugs in and around the house, the garage must not be forgotten—modern day sprays and plant foods are dangerous poisons and should not be overlooked in the survey of a home.

In the section on poisoning in the accident hand-

book the following instructions are given: Make the child vomit—by putting one's finger down his throat. If this is unsuccessful he should be given a salt solution to drink (1 to 2 tablespoons of salt dissolved in a glass of warm water) or warm water and mustard powder. After he has vomited, give him some milk to swallow and take him to the nearest doctor or hospital. If vomiting does not occur give him some milk and get medical attention immediately. Take with you the bottle or box from which he obtained the poison so that exact information may be given to the doctor regarding the material ingested.

Now let me review these instruction. The most important item is inducing vomiting and all subsequent therapy for the child who has swallowed poisonous material is of relatively little importance compared with the value of prompt removal of the poison. This may be difficult to accomplish. All are familiar with the child who gags and vomits most annoyingly on a small piece of meat, yet when one desparately wants to force him to vomit not even a whole hand in the pharynx will be successful. Furthermore the terrified mother and the hysterical child are frequently a poor combination to bring about the swallowing of concentrated salt solution or mustard suspension. Hence the need of wasting no further time with such a child and the need of prompt gastric lavage. A good universal antidote for poisons may be made by the following: 2 parts of pulverized charcoal, 1 part of magnesium oxide and 1 part of tannic acid; 1 teaspoon of this mixture in a cup of lukewarm water is recommended. Home equivalents of the universal antidote are: burned toast 2 parts, milk of magnesia 1 part and strong tea 1 part. However, no antidote is as effective as the immediate emptying of stomach contents if this is at all possible. Syrup of Ipecac may be useful in producing vomiting and if available is most effective. It is primarily advantageous because the amount (1 teaspoon) which must be given is small.

At this point a word of caution should be inserted regarding two types of poisoning in which vomiting should not be produced, namely, lye and strong acids. In poisoning from lye and strong acids damage is done as soon as the poison touches the tissues of the gastrointestinal tract and vomiting will be of no benefit. In kerosene ingestion vomiting may, according to some workers, result in aspiration of kerosene into the lungs. Not all agree with this attitude toward kerosene ingestion; some investigators feel that vomiting will produce no further damage to the lungs and that the resulting diminution in amount of kerosene absorbed will lessen the danger to the kidneys and liver.

The next step in the physician's responsibility is gastric lavage which should be carried out in all cases of poisonings except those caused by strong alkalis or acids in which there might be danger of perforation or in case of strychnine ingestion in which lavage may cause convulsions and should not be done until sedation is achieved. Lavage must be done regardless of whether or not vomiting had occurred earlier. Lavage should be carried out as quickly as possible and done in the home or office if the physician is close by. The child should be wrapped in a thin blanket which should be tightly pinned to prevent him from getting his arms loose. He should be placed on his right side with the foot of the bed elevated. A number 10 F catheter is passed through the nostril and into the stomach. The tube should not be passed into the mouth since a struggling child may quite effectively bite through the catheter leaving the physician confronted not only with poison in the stomach but also a piece of rubber catheter. The catheter should always be moistened with water prior to passage. The best syringe to employ is a 50 cc. asepto syringe with bulb; the ordinary glass syringe is much more awkward to use since the tip does not fit into the catheter as tightly as does the tip of the asepto syringe and is also harder to detach. Tap water, containing a specific antidote if one is available for the poison, is injected into the stomach after as much as possible of the contents have been removed. It is unwise to inject large quantities of water at a time since this promotes passage of material from stomach into the small bowel. Small quantities should be injected at a time and then withdrawn.

At this point a brief review of a physician's responsibilities with regard to cases of poisoning is in order; this may be important from a medicolegal point of view. Contact with the physician is usually made by telephone and immediately the physician assumes full responsibility for the patient. The mother should be instructed to attempt to make the child vomit and whether successful or not in this regard to then go at once to the doctor's office or hospital bringing along the container from which the poison was obtained. Only too frequently the material ingested was never meant to be taken by mouth and the ingredients are not listed on the package. The physician is responsible in such instances for assuming that the material is poisonous and that the stomach should be lavaged. He is also responsible for endeavoring to learn the exact nature of the material ingested by calling the manufacturer if necessary so that proper therapy can be instituted. Failure to proceed in this manner constitutes medical if not legal neglect on the part of the physician. It is highly important to remember that drugs which were previously considered innocuous have been shown to be potential poisons. One of the best examples of this is feosol tablets which may prove to be a deadly poison. Several of the first instances of poisoning by this agent had a fatal outcome from gastrointestinal hemorrhage merely because the physician consulted felt that this particular agent could not possibly be injurious. Frequently, too, the physician, uncertain as to the quantity of

poison ingested, is tempted to wait and watch, sparing the child the discomfort of gastric lavage. This is always dangerous both for child and physician. Whether or not gastric lavage is of great benefit to the patient it is a necessary procedure from a medico-legal point of view and should not be omitted unless the exact quantity of drug or poison taken is known. Since such situations are usually uncommon, proper care requires the assumption that a dangerous dose was ingested.

Finally, the physician is entirely responsible after the gastric lavage has been completed to determine if the child should be hospitalized or if he can remain at home. This may frequently be a difficult problem to decide and the wise physician, weighing the various factors which operate to affect his decision, should not be influenced by the desire to spare the child. There can be no charge of mishandling or neglect if the child is in the hospital and since many of the signs and symptoms of various poisons appear relatively late, observation is much more satisfactory inside the walls of the hospital.

A word of caution should be inserted as to the physician himself as potential poisoner. Only too often one encounters cases of poisoning caused by the failure on the part of the physician to be specific about dosage of drugs. In stating dosage of vitamin concentrates the physician should caution the mother that because 10 drops are good 40 drops are not better. If a 5 grain tablet of aspirin is recommended for a small child, the parent should be warned that this dose must not be given every four hours. Morphine and atropine should not be prescribed for infants in the home since the margin of safety in this age group with the use of these drugs is extremely small.

I should like to close with a few case histories to illustrate various poisonings in children who have recently come to my attention.

CASE REPORTS

S. D. At 6:00 p.m., a 2 year old white male ingested approximately 12 Feosol tablets. The mother immediately notified her physician who reassured her. Vomiting was not induced, no treatment was given, and the child was put to bed. The parents heard nothing unusual during the night. On entering the child's room at 7:00 a.m., the following morning he was found dead in bed lying in a pool of vomitus containing changed blood with clots. Autopsy revealed necrosis of the mucosa of the stomach and small intestines.

A. L. is a 4 year old girl, daughter of a physician. At 10:00 a.m. while playing with several children a rug was pulled out from under her and she fell striking her head. One hour later she suddenly went into coma. She was about to undergo operation when her pin-point pupils led to a hurried investigation as to the possibility of poisoning. On questioning, a 5 year old sibling reported that the child had eaten some pills taken from the father's bag. Operation was withheld, the child was treated for morphine poisoning, and had an uneventful recovery.

A. D. G. A 2½ year old child chewed an estimated 20 aspergum tablets. This information was not divulged to the physician who was asked to see her eighteen hours later because of rapid respirations. She was treated for twenty-four hours for pneumonia and then hospitalized because she was semi-stuporous. There the history was obtained and therapy instituted.

N. F. A 7 months old infant who had just started to crawl ingested a "small" quantity of oil of wintergreen which had been used by her father for his muscle pains. No attempt was made to get in touch with a physician because the parents felt that only a small amount had been swallowed. Eight hours later she was found in a stuporous state; respirations were rapid and labored. She was admitted to the hospital but died despite therapy.

T. J. A 3 year old white male, the son of a physician, invested 4 ounces of an antihistamine preparation (containing pyribenzamine) from a sample bottle which the physician had left on a hall table. The child was found one half hour later sleeping deeply, and shortly afterward developed a series of severe generalized convulsions which proved difficult to control. Two hours after admission to the hospital respirations ceased despite all therapy.

L. N. D. A 5 year old white male, son of a farmer, overturned a jug of plant spray while playing in the barn. The liquid soaked through his trousers but he said nothing to his parents. The following day he wore the same trousers. He began to vomit, complained of headache and perspired excessively. On admission to the hospital he was noted to have pinpoint pupils. Careful questioning revealed the events of the previous day and the contents of the jug proved to contain parathion. He was treated with large doses of atropine and recovered uneventfully.

In closing, I should like to plead once again for physicians in this country to assume their proper position in their communities in the education of the public with regard to deaths by accident and methods of prevention. The handbook discussed today is only one method of education; better still is the education which can be done at each visit to the doctor's office of the parents of a young infant. With just a few words the physician can stress the potential hazards confronting the growing child and ways and means of educating the child in the recognition of such hazards.

330 Brookline Ave.

Who Protects Blue Cross

Physicians' abuse of Blue Cross and other health insurance plans might destroy these means for combatting the government control of Medicine....Blue Cross protects forty million Americans—one person in every four. In the face of the cases...the question arises "Who protects Blue Cross?"...When a doctor prescribes hospitalization he refers the patient to a hospital and Blue Cross pays the bill. It does not question through lengthy questionnaires the recommendation of the physician. It thus places its very existence in the hands of the medical profession. In turn, it must depend upon doctors for protection against possible abuse. It is as simple as that.—"Blue Cross Blues," *Santa Clara* (California) *County Medical Society Bulletin.*

RESPONSIBILITIES OF THE MEDICAL SCHOOL TO THE STATE IT SERVES

W. CLARKE WESCOE, M.D.
KANSAS CITY, KANSAS

THE TITLE OF MY address, as it was suggested to me by the program committee, might indicate that only a medical school supported by state or municipal funds will be under discussion for the next thirty minutes. I would disabuse you of that idea at the outset; I have chosen to give the broadest possible interpretation to my subject. The remarks that I have to make are general—they apply, I believe, as much to privately endowed as to public supported institutions.

In every summary of the condition of medical education as outlined in the annual educational number of the *Journal of the American Medical Association,* two general types of schools are set forth: the private and the public. This is, perhaps, a misleading emphasis for it is not always clearly understood by the casual surveyor of these data that the terms "public" and "private" relate merely to the source of operational funds. There is, to be sure, only one type of medicine being taught in the United States today and, on the whole, curricula of the many schools vary but little, one from the other. It has been my privilege to teach in both types of institution and I have no hesitancy in saying that the teaching and programs of the two show no inherent differences.

Each school, I believe, has the same obligation of service to the state or region in which it is located, no matter what the source of its operating funds. I believe, further, that most schools have accepted this obligation, albeit grudgingly, reluctantly or only in part, in the case of some.

Service is an inherent part of medical education; it cannot be avoided. The laboratories of a medical school and its hospital wards serve dual functions as do its faculty members and staff. The student himself, as he pursues his studies, inevitably performs services both large and small.

The difficult problem that faces the medical educator is to preserve a balance between pure service and education. Service can be provided only so long as it is compatible with a broad educational program. It is sometimes difficult to convince the legislator or trustee of this fact, to keep him enlightened and cognizant that the primary function of the medical school is education, that service can be given only to the point at which it becomes prejudicial to or incompatible with an academic program. Beyond this point service cannot be given. Deep are the pits into which some administrators have fallen (or have been pushed) because they have not been able to stop short at this dividing line. A good educational program cannot fail to give service; unfortunately, the converse is not true—many of the best service programs have absolutely no educational value. I trust that you will indulge my pride in state long enough to let me say that the people of Kansas and their legislators understand these precepts.

The medical school has these as its responsibilities: that it defines the needs of its state with respect to medicine, that it formulates programs to meet these needs, that it implements these programs as wisely and as rapidly as possible. I should like here to present some examples. Four years ago the State of Kansas was faced with two grave medical problems: it was losing doctors almost at the same rate as it was gaining population; its mental hospitals were in a deplorable condition. The medical school was able to help in the solution of these two problems—in the first case by spearheading, under the direction of my predecessor, Dr. Murphy, a rural health program, and in the second case by volunteering to aid a program that had already achieved phenomenal success under the direction of a farsighted Board of Social Welfare composed of laymen.

The rural health program, or Kansas plan as it has been called, was thoughtfully conceived by the dean of the medical school, the state medical society, the state farm bureau and the state legislature. Its provisions were simple: the medical school was enlarged, small community hospitals were built and attractive offices were made available to young physicians. As a part of the program a rural health preceptorship was made a part of the school's curriculum. For periods of six to twelve weeks, each fourth year medical student was assigned to a carefully selected physician practicing in a community whose population did not exceed 2,500 persons; with this physician he lived, observed and worked.

I have recently collected the statistics of the four years that have elapsed since this program was put into effect; the program has been an undeniable success. In each of the last two years Kansas has gained a few more than one hundred doctors; further, seventy-nine physicians settled to practice in towns of 1,500 persons or less in the same period. Two trends were reversed—the shift from rural to urban medicine, and the steady loss of doctors from the state. This, I believe, was in large part due to the imaginative leadership of the medical school's administration.

So successful was this program that the school has recently instituted a similar preceptorship program in each of four of the state's mental institutions. As I indicated previously, the Board of Social Welfare had performed a magnificent job; they had elevated Kansas from an unenviable and shameful forty-fourth position among the states to an enviable and prideful eleventh position. They had instituted training programs for residents, nurses and psychiatric aides but were still plagued by a lack of medical personnel. The new preceptorship program was begun because the medical school faculty felt that it could not attract physicians into careers in these institutions

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

unless it exposed them as students to the problems and opportunities that exist within them. This program is still in its infancy and no statistics can be quoted. I am willing to predict, however, that it, too, will be successful.

The success of these programs, I believe, is related directly to the fact that the preceptorships are integral parts of the medical school's curriculum. The school accepts full responsibility for them and keeps them under close supervision. We now have a large number of men asking to be named as rural health preceptors. In a similar fashion we expect that men will apply for institutional positions because they will have the added advantage of an academic appointment. The prospect of such an academic appointment serves to break down the reluctance of men to accept such institutional positions, often located in relatively isolated areas. This program is perhaps a perfect example of the blending of education (selected clinical material) and service (better patient care).

I have taken these two programs as examples of what a medical school can do and how it can meet its responsibilities. Many other examples, perhaps better ones, could have been cited. Among them would have been the excellent results obtained by close cooperation between medical schools and the Veterans Administration hospitals. I have chosen these Kansas programs merely because I have been closer to them and consequently know them better.

Medical schools also have the responsibility for providing necessary consultative services to governmental and private instrumentalities. Departments of health, boards of medical licensure, social welfare agencies and community hospitals often find need for expert opinions. These should and must be provided by the medical school, even to the point of temporary loan of personnel. Such consultation provides dual benefits—one to the interested agency and one to the school.

Affiliated teaching programs fall into this category. By affiliations more clinical teaching material is made available to the schools and good teaching programs are provided for the senior and junior staffs of the affiliating hospital. This community in which we are met today has several of these programs in operation, to the mutual benefit of both parties involved.

More affiliations are in the offing, particularly in the field of postgraduate training. We are interested, for instance, in beginning residency rotational programs in some of the larger hospitals throughout Kansas. In this way the resident can be given a particular sort of experience outside the environment of the medical school and the hospital's training program can be upgraded.

The medical school also has a responsibility to the practitioners of medicine in the area which it serves. This responsibility is the provision of postgraduate medical training. I have little doubt but that the recent increase in the number of physicians settling to practice in Kansas is related, in part, to the fact that the medical school has provided a vigorous and fairly complete program of this type. Each of these new physicians has within easy reach the opportunity for pursuing further training in many fields—special and general.

A postgraduate program can be made successful only if it is developed to fit the needs and desires of the active practitioner. For this reason our own particular program has been reevaluated yearly by a committee made up of representatives from the Kansas Medical Society and the state Department of Health as well as of members of the medical school faculty. This is a sort of grass roots approach to the problem; the medical school attempts to provide as nearly as is possible the type of program in which the greatest number of physicians is interested.

In order that as complete coverage as is possible may be provided, several types of programs are arranged. The first type, "the refresher courses," is conducted on the medical center campus. These programs, varying in length from two to five days, are presented by the medical school faculty and varying numbers of guest faculty from other medical schools. They are comprised of lectures, ward rounds and audiovisual demonstrations.

The refresher programs are particularly effective because they allow the physician to withdraw himself from the pressures of patient calls, telephones and the like and to satisfy his educational needs in the atmosphere of the university. The university gains a great deal, too, from this program because there is hardly a physician who attends who does not leave feeling that he has a stake in the medical school and is, in fact, an alumnus of it.

For doctors who have more time to spend, intraining programs of weeks' to months' duration are provided. These programs are much akin to the regular residency training programs and through them the physician can brush up on the specialty in which he is most interested. There is no department that does not provide such programs at the medical school.

The third type of program is the most adventurous. Working on the precept that it is not always possible for the mountain to come to Mahomet, Mahomet goes to the mountain. Each year the University of Kansas sets up two circuit type programs, one in Missouri and one in Kansas, the latter split into two divisions. Once each month teachers drawn from the University faculty and medical society alike make one of these circuits. In essence, the University is taken to the practitioner. In his own environment and without much traveling on his part he is able to hear lectures on subjects of wide interest and largely of his selection. In addition, a clinical pathologic conference is provided. In this way, last year, our postgraduate department reached more than four

hundred physicians; this was the largest program of its type in the United States.

I would like now to return to the responsibilities of the medical school to the state. There would seem to be little doubt that the greatest responsibility in this area relates to the replenishing of the supply of doctors for the state. Statistics of the Association of American Medical Colleges show clearly that the young physician is likely to settle in the area wherein he receives his medical education. It is incumbent upon the medical school, therefore, to be alert to the needs of the times and to the training most useful to the young practitioner.

The truly progressive medical school constantly reassesses its curriculum content. Such reassessment, by the way, is now the order of the day. More curriculum changes are being discussed and implemented now than have been in the last forty years. All of these changes are in the direction of closer integration and better coordination between the various disciplines. I have some things to say about these changes and I believe that some of them may be more than slightly controversial.

Medical education has been held back in the past, perhaps unwittingly, by the reluctance of some faculty members, whom I choose to call the vested interests, to relinquish some of their teaching time in order that newer developments might be taught and newer disciplines integrated into the whole. Although I certainly hold nothing against the anatomists I would like to take them as an example. There was a time when anatomy was the only so-called preclinical science that was taught; it was the only one about which anything was known and the only one for which there was laboratory material. As a consequence the teaching of anatomy traditionally occupied a large number of curriculum hours. When the rapidly growing fields of physiology, biochemistry and pharmacology attained maturity they were too often squeezed into the hours that were left. By constant squeezing, some oddly shaped curricula were produced. I can only point by way of analogy to what fashion and the restraining girdle can do to the female figure.

It is to the discredit of medical educators that advances were too often made by simple addition, not by judicious division and subtraction. Medical curricula became jerry-built structures; cracks appeared in the superstructure—and the cracks gradually widened.

Now we are in an era in which curricula are being planned not with regard to hours but to content. Multiplicity of detail and endless repetition are avoided. The best man is assigned to a subject without regard to his departmental affiliation. This is a healthy and refreshing era and I am delighted to be actively teaching in it.

The accusing finger points, however, not at the preclinical subjects alone. It points alike to the clinical sphere and herein rests our greatest problem. I would like to say a few words about it.

The undergraduate medical student is taught perforce in a hospital. But the hospital is planned not for the undergraduate medical student but for the training of postgraduate residents and staff in many clinical specialties. There appears to be little doubt that patient care is excellent under these circumstances and postgraduate training is superb.

The student, however, is trapped in this situation. He is taught not in a system designed for his benefit but in one superimposed from above and by virtue of many pressures from the outside. Witness what occasionally happens: a patient is admitted to a medical service for diagnosis of an obscure process, the medical student takes the history and performs the physical examination. A finding is made that makes surgical intervention necessary. Immediately the patient is whisked to a surgical service—and this may be the last that this particular student sees of him.

It is time that some strenuous thinking is done about the division between the undergraduate and postgraduate training. Too much specialization for the undergraduate is to be avoided; we owe it to him to teach general principles, not fine details. He needs to know the common diseases and usual procedures, not the bizarre maladies and the exotic instrumentations—more of the removal of the appendix and less of the mitral valvulotomy.

I am not certain, however, that the specialty groups agree with this principle. My desk is constantly besieged by requests from specialty groups for information: How many hours are devoted to their specialty? Are we meeting what they think are minimum requirements? Is their specialty dignified by being an independent department in the school or is it a semi-autonomous section of a larger whole? If funds were made available could we use them for this particular field? "Ay, there's the rub"; that latter is a real temptation. In my opinion these requests do undergraduate medical education a real disservice. What we need for the undergraduate is less specialization, more feeling for generalization, less splintering, more cohesion.

Each state has its greatest need for the family physician. I believe, therefore, that the school's responsibility is best met by providing a curriculum with that in mind. Curriculum planning can no longer be a purely academic but must be rather a practical exercise.

As a last responsibility I would point out this: that the medical school should provide information to the general public. The services that it can make available should be well known. Its faculty should be available for addresses to lay groups and medical societies alike. It should lead the way in providing good public relations for the medical profession as a whole.

To the medical school falls the responsibility for performing all of these functions, to innovate

and to set the course, in the most economical fashion. Imagination and ideas cannot be bought; they should come spontaneously and without great price. There is a great deal of discussion today about the cost of medical education. Too often, I am afraid, funds are confused with fruitfulness, dollars with "drive." Our university is dedicated to the precept that ideas should be tested even if financial support is not in sight. No successful program has even been curtailed for lack of funds. The phrase "where there's a will, there's a way" does not refer to legal testaments.

I have said many things that I am certain have been said much more literately and lucidly before. I have brought you no new and startling facts. What I have tried to say most of all is that the medical school should be attentive to community needs and receptive to fresh ideas. It should create and it should serve. It should, above all, provide leadership. These things it should do freely and easily—of its own inner drive. Perhaps this is best summed up by one of the less frequently quoted portions of the Sermon on the Mount. The medical school, above all others, must be willing, today and always, to "go the second mile."

University of Kansas Medical Center.

House Staff Anesthesia

The resident house staff of St. Louis Maternity Hospital conducted 5,000 continuous caudal anesthetics over a seven year period. In 81.5 per cent of the patients the results were entirely satisfactory. Partial success was obtained in 5 per cent. Failures occurred in 13.5 per cent....The technics and practices are relatively simple and can be taught successfully at the house staff level—Albert Goldhar, M.D., William H. Masters, M.D., St. Louis, "Continuous Caudal Analgesia," *Mississippi Valley Medical Journal.*

Volvulus in Pregnancy

Early diagnosis...is difficult, because some of the normal signs of pregnancy are similar to signs observed in cases of obstruction. The importance of employing not only a single scout film of the abdomen but also a follow-up film in twelve to twenty-four hours is emphasized. In early volvulus the first...may disclose no abnormality....Diagnosis of obstruction... is complicated by the fact that normal ileus of pregnancy must be differentiated from obstruction. The prognosis is greatly improved if the volvulus is diagnosed early and surgical correction undertaken. Delay is responsible for almost a 60 per cent maternal mortality.—Phillip H. Halperin, M.D., Bela Kent, M.D., Sidney Rubin, M.D., Kansas City, *Journal of the American Medical Association.*

"Hypochondriac"

Pain is pain, whether it is "purely" psychic, or "purely" somatic, or a mongrel of the two. There is no such thing as "imaginary" pain.—G. Zelboorg, M.D., *J. Michigan State Medical Society.*

TREATMENT OF CONGESTIVE HEART FAILURE

T. REID JONES, M.D.
KANSAS CITY

THE TREATMENT of congestive heart failure should be undertaken with much hope. The cause often is not recognized until the patient has been observed repeatedly. Heart disease may masquerade as the precipitating cause of heart failure while the true precipitating cause is extracardiac and curable. The recuperative powers of the myocardium cannot be measured.

Two things are to be emphasized: First, the failing heart often labors under extraneous loads which can be removed; second, meticulous attention to details of treatment makes the difference between therapeutic success and failure.

REST

An initial period of complete rest is as valuable as formerly in the treatment of heart failure. This may have to be chair rest because of orthopnea but most patients can lie in bed, often flat, for an hour or longer before developing discomfort. The horizontal position is conducive to diuresis, to relaxation and to restriction of bodily activity. Exercising the feet and toes against a foot board maintains venous flow in the lower extremities with a minimum of expenditure of work. If the patient must sit up periodically to avoid dyspnea, there is no reason why he should not do so, by day or by night. In conjunction with this, sedatives, when used, should often be applied around the clock.

These properties of bed rest are used with advantage in those patients who, having regained compensation, maintain it with difficulty. One day a week in bed is often an excellent prescription, even for wage earners.

DIGITALIS

Congestive heart failure is an indication for digitalis. It must be used with caution in failure due to high cardiac output, in which the myocardium may still be functioning efficiently and be depending on high venous pressure to do so. Such cases respond rather poorly to digitalis; adverse responses are few.

Preparations preferred for nonemergency use are whole powered leaf, digitoxin and digoxin. All are reasonably rapid in action. Digitoxin and digoxin can be given intravenously in cases of gastric intolerance. Overdosage is more easily detected when giving powdered leaf, and powdered leaf is still my favorite for chronic digitalization. Elimination is much faster when giving digoxin, a manifest advantage in rapid digitalization with its greater risk of overdosage. Maintenance dose

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

of all three preparations varies from patient to patient.

One must not pay too much attention to the old rule of giving digitalis until the resting pulse rate is in the seventies. Each case has its own optimum rate, varying in the absence of block from 110 down to 50. If the observed optimum pulse rate after recompensation is a rapid one, a renewed search should be made for such diseases as hyperthyroidism. A high saturating or maintenance dose of digitalis similarly suggests the possibility of hypermetabolic disease.

Emergency Use of Digitalis.—In the patient desperately ill with congestive heart failure, ouabain or Lanatoside C may be given intravenously, provided the patient has received no digitalis preparation within two weeks. Ouabain, 0.5 mg., may be followed at thirty minute intervals by 0.1 mg. doses to a maximum of five. Lanatoside C, 0.8 mg. may be repeated once after thirty minutes, or the second dose may be divided. A situation so grave as to require these measures is rarely met. Results are prompt (one half to one hour) but also of brief duration so that another, longer acting, preparation should be begun in divided doses. Digoxin does not act much more rapidly by vein than by mouth.

If the patient has received unknown amounts of digitalis within two weeks, intravenous administration is dangerous; a more fractional dosage is required. One might venture as follows, using Lanatoside C: 0.2 mg. initially, followed in one hour by 0.4 mg. and two hours after that by another 0.4 mg. for a total of 1.0 mg. By this time the patient should be showing results, especially as he should also have received some digoxin and one or more venesections. The appearance of coupled beats is a danger signal. An electrocardiogram should be taken before each dose.

Maintenance of Digitalis.—Most patients with chronic heart disease, who have once been given digitalis for congestive failure with benefit, will do better if maintained thereafter on digitalis. But this is not a guide for any individual case. Digitalis therapy should be permanent only when myocardial insufficiency is permanent. Transitory or removable loading factors may be the actual cause of failure in a diseased but not permanently insufficient heart. Examples are obesity, heavy manual labor and infections.

OXYGEN

Aside from its use in pulmonary edema, oxygen is not as a rule helpful. Unless it produces subjective relief, or objective improvement in pulse, color or respiration, it is better omitted for the sake of comfort. Since arterial oxygen saturation is not much decreased in the absence of pulmonary complications, high concentrations are usually necessary.

MECHANICAL MEASURES

Thoracentesis, abdominal paracentesis and Southey or Southey-Leech tubes are three excellent methods of removing fluid rapidly. I doubt whether the indications for them have changed over the years. If rest, digitalis and diuretics do not begin to mobilize fluid promptly, one should not hesitate to resort to these measures. Repeated tapping leads to some depletion of protein, it is true; but one or two taps may turn the tide in an unfavorable case.

MANAGEMENT OF SODIUM BALANCE

The mechanism by which sodium and water accumulate in congestive failure is a controversial subject and is not concerned here. Rest, by lessening the requirements for cardiac output, and digitalis, by improving myocardial function, attack the cause of sodium and water accumulation. Direct diuretic measures are required in most cases and are at least useful in nearly all.

If a patient can be recompensated but continues to require regular treatment to remove sodium and water, some myocardial insufficiency must remain; such therapy can only be called moderately successful and the physician ought not to be fully satisfied. Some removable loading factor should be sought for. Examples are chronic infection, anemia, mitral stenosis suitable for surgery.

But many patients in whom failure has once occurred cannot maintain their compensation without a continued attack upon sodium and water accumulation. By management of sodium balance many of these can be kept at productive activity for long periods of time. The methods are:

1. Restrict sodium intake (a) by special diet low in sodium, (b) by interfering with absorption of sodium from the gastrointestinal tract (resins).
2. Increase sodium output (a) by acidification, (b) increase renal blood flow (xanthines), (c) interfere with tubular reabsorption of sodium (mercurials), (d) water removing substances (nitrates, urea).

Diet.—Diet is as important in chronic myocardial insufficiency as in diabetes. The initial instructions should be exact and emphatic, and the reasons made clear.

When sodium restriction must be followed over a long period, a nutritional problem is implicit, involving protein and vitamins. The low sodium, high protein diet supplements now on the market are most useful. Their results are not dramatic, but appear over the long term.

Resins.—Cation exchange resins, as used therapeutically, exchange hydrogen or ammonium ions for metallic ions in the gastrointestinal tract, outside the body proper; the resin with its bound ions leaves via the stool. This exchange is potentially great because large quantities of sodium and potassium are ordinarily excreted and reabsorbed by the gastrointestinal tract, and are thus exposed to the action of the resin. Therefore these resins are powerfully "desalting" and particularly

tend to remove sodium and potassium from the body.

In addition, the hydrogen or ammonium ions left behind by the exchange are absorbed, with the same result as if hydrochloric acid or ammonium chloride were administered: i.e., an acidosis. So long as it is compensated this acidosis is beneficial, promoting sodium excretion by the kidney. However, this makes resin therapy contraindicated in renal insufficiency and constitutes an element of danger in all cases.

Because of the properties described, the available resins have added to them potassium saturated resin, to avoid potassium depletion, and anion exchange resin, to decrease acidosis.

The objections to resin therapy are: (1) experience in their use is limited, (2) they are unpleasant for some patients to take, (3) they are expensive and (4) constant supervision is necessary to avoid serious electrolyte disturbances.

These electrolyte disturbances may be of various types, and may occur early or late.

Resin therapy should therefore be restricted to those patients in whom other sodium controlling measures fail. Resins are not a substitute, for example, for a reasonable low sodium diet faithfully followed. Blood chemical analysis, including sodium, potassium, carbon dioxide and chlorides, should be available.

In practice, resins are reported to work best with a diet containing from three to six grams of sodium chloride. The resin should periodically be withdrawn for a few days as a protection against electrolyte imbalance. Warning symptoms of such imbalance are muscular weakness and anorexia, and the patient should be told to report these promptly. Serum electrolyte analyses should be made weekly at first. Calcium, vitamin and possibly magnesium supplements should be fed. Ammonium chloride appears to be contraindicated inasmuch as the resin is an acidifying agent. There is no objection to accompanying resin therapy with mercurial diuretics and xanthines.

Acidifying Drugs.—Acidifying therapy is of varying and unpredictable usefulness. Ammonium nitrate is sometimes more effective than ammonium chloride. While these drugs may be diuretics used alone, they are more useful as adjuncts to mercurial diuretics. Four grams per day on three successive days per week is the suggested dosage regimen, regardless of the frequency of any mercurial injections.

Xanthines.—These are excellent drugs. They appear to improve cerebral and coronary blood flow; they often decrease orthropnea and prevent or relieve pulmonary edema. One tends to think of them as incidentally and poorly diuretic but their diuretic action is excellent in some patients. Like the acidifying drugs, they appear to enhance the action of mercurials and are combined with mercurials in some preparations.

Mercurial Diuretics.—Preparations currently in wide use are Mercuhydrin, Mercuzanthin, Salyrgan-theophyllin and Thiomerin. All may be used intravenously or intramuscularly. Thiomerin may be, and usually is, used subcutaneously because it acts more slowly and less disturbingly by this route. Thiomerin has been reported from several quarters to give better diuresis, with less discomfort, than other mercurials.

The contraindications to mercurials are fewer than formerly supposed and, at present, do not seem well established. I consider the following as contraindications.

1. Absolute: (a) acute or chronic nephritis, (b) anuria, (c) rising nonprotein nitrogen under mercurial treatment, (d) appearance of albuminuria, cylindruria or hematuria under mercurial treatment, (e) sensitivity to mercurials, (f) mercurialism, (g) inflammatory lesions of the colon.

2. Relative (use under great necessity): (a) nonprotein nitrogen above 50 mg. per 100 cc. with intrinsic renal function questionably adequate, (b) mild chronic renal insufficiency, (c) questionable sensitivity.

Mercurials should be administered, whether orally or by injection, frequently enough to keep the patient comfortable and free of edema. Decreasing effect from successive injections suggests a developing electrolyte disorder such as chloride deficit. Ammonium chloride may correct the deficit, whereupon the mercurial again becomes effective. Other means of enhancing the effect of mercurials include the concurrent administration of a xanthine or of decholin intravenously, rest in bed on the day of injection, or the administration of potassium chloride by mouth for a few days. Antidiuretic effects of morphine or Demerol are sometimes at fault.

A more serious electrolyte deficit, that of sodium itself, may occur in chronic mercurial treatment. Its clinical picture varies, but in severe form includes anorexia, lassitude, mental apathy or confusion, oliguria and peripheral collapse. The treatment is hypertonic sodium chloride by vein. It is essential to restrict water by mouth drastically, in spite of the resulting thirst.

MEASUREMENTS

The importance of measuring body weight, fluid intake and fluid output needs no emphasis. I would, however, emphasize two things:

In the hospitalized case, "look behind the chart," questioning not only the accuracy of the intake and output record, but also whether diet and medications are actually given, and taken, as ordered; and whether the patient is getting sodium from other sources, such as tooth powder or the bottle of proprietary medicine in his bedside table.

Make full use of measurements in the house confined patient. They will usually be accurate, and the task is both instructive and a good discipline for the member of the family in charge of diet and medicines.

ANTICOAGULANTS

If laboratory controls are available, anticoagulants may find use in two types of cases: those liable or prone to embolic accidents, and those in whom recurrent pulmonary embolism is suspected but not proven.

Patients with a history of one or more thromboembolic episodes are likely to have another when in congestive failure.

I consider venous thrombosis in the lower extremities an indication for anticoagulants, whether congestive failure is present or not, but especially when it is present.

Patients with marked inanition due to age, debility or fracture immobilization are liable to thromboembolic episodes.

Certain cases of so-called "intractable failure" in whom accessory loading factors and inaccuracies in carrying out treatment are ruled out, may be having recurrent small pulmonary emboli from leg veins, pelvic veins or right auricle.

When any of these circumstances accompany congestive heart failure, anticoagulant therapy should at least be considered seriously.

PULMONARY EDEMA

Morphine, tourniquets, venesection, oxygen and intravenous aminophyllin are familiar and established in the treatment of this cardiac emergency. Emergency digitalization, as described earlier, has its dangers; but it is indicated in the graver cases which have not recently received digitalis and in an occasional desperately ill patient who has. Rapid digitalization with digoxin, as opposed to immediate digitalization, is commonly preferable.

Three types of inhalation therapy have been used with benefit: oxygen mixed with helium, oxygen under positive pressure and oxygen passed through alcohol. The first of these is not usually available in a hurry. Positive pressure oxygen by meter mask is valuable and well tried. Alcohol vapor-oxygen, which has antifoaming properties, is given by a cheap and easily made modification of ordinary equipment.

Generally a mercurial diuretic should be given, as a first step in preventing the next bout of pulmonary edema.

For prevention of pulmonary edema I have a high opinion of aminophyllin, giving 3 grains at bedtime with ¼ grain of phenobarbital, and often repeating the dose four hours later. My patients prefer awakening for the second dose to taking these drugs as a rectal suppository. Another, not infrequent preventive of pulmonary edema is a small bedtime meal, such as a glass of milk.

SUMMARY

Management of the usual case of congestive heart failure consists of an initial period of rest in bed, the administration of digitalis, limitation of sodium and caloric intake and diuretics.

Search should be made repeatedly for conditions known to impose burdens on the heart.

Diuretics are indicated in most cases. Chief reliance is placed on mercurial drugs; acidifying drugs and xanthines serve chiefly as adjuncts. However, xanthines are useful in improving cerebral and coronary circulation and in pulmonary edema.

Intravenous digitalization with the rapidly acting glycosides should be limited to grave emergencies.

Cation exchange resins appear to have a place in selected cases, but are not expected to supplant any other measure. They may be combined with mercurial diuretics but probably should not be given concurrently with acidifying drugs. Their dangers require certain safeguards.

Indications are specific for oxygen, venesection and the mechanical removal of accumulated fluid. Indications are fairly specific for anticoagulant therapy.

Overtreatment is common and the physician should be alert to recognize the need for a rest in drug treatment.

1102 Grand Ave.

If the Shoe Fits . . .

. . . Whenever an editorial happens to be about some subject that is of a personal nature the first group doesn't need it, and the second group ignores it completely, as was to be expected. Some in the first class, however, get very upset because they think the writer is criticizing them for not doing more than they already are. This is not true....An editorial is directed at the third group, those who have perhaps become a little slack in their responsibilities, those... not aware of the seriousness of the situation...thought that everything was all right until the facts were presented, and also to those who could help solve the problem....—G. Wilse Robinson, Jr., M.D., *Jackson County Medical Society Bulletin.*

Patient Satisfaction

. . . the practice of Dentistry is the combination of a Profession and a Business. The Profession is what we do for the Patient. The Business is what the Patient does for us. For this transaction to be mutually satisfactory, we must give to the patient a full dollar's worth for every dollar invested. By the same token, we must get the dollar we have earned. (Applicable 100 per cent to practice of medicine. Ed.)—The Listening Chair, *Kansas City District Dental Society Bulletin.*

. . . A Fool for a Patient?

. . . It would appear that tranquility, moderation in diet and a good hobby are of great value in the attainment of that proverbial three score and ten years. In the absence of specific preventive measures, the admonition "Physician heal thyself" takes on added significance.—Charles F. Wilson, M.D., The President's Page, *Cape Girardeau County Society Medical Bulletin.*

THE APPLICATION OF RADIOISOTOPES TO CLINICAL PRACTICE

HARRY STATLAND, M.D.
KANSAS CITY
AND
SIDNEY RUBIN, M.D.
KANSAS CITY
AND
LEONARD WALKER, PH.D.
KANSAS CITY

THE RAPID ADVANCES in isotope technics and the increasing number of isotope laboratories make it imperative that all medical practitioners understand the values and limitations of this new diagnostic and therapeutic tool. We have attempted here to compile in simple form the pertinent present day data necessary for the intelligent use of isotopes by the medical man and surgeon.

RADIOACTIVE IODINE: I^{131}

I^{131} is given as a tracer dose in quantities varying from 10 to 100 microcuries and depending on the information desired may be used in the following manners:

1. Total uptake of I^{131} by the thyroid gland: The percentage uptake indicates the degree of avidity of the thyroid gland for iodine. The standards of uptake need to be determined for each laboratory but in general low uptakes (15 per cent or less) indicate myxedema, high uptakes (50 per cent or more) indicate hyperthyroidism, and intermediate uptakes indicate euthyroidism. It must be understood that one cannot reduce these various clinical states to any exact uptake figure and that overlapping will occur. The colloid goiters which occur in endemic goiter areas may show high uptakes in the presence of euthyroidism, since iodine deficiency causes recurring cycles of thyriod hyperplasia. Uptake studies are one of the best available tests for determing thyroid function in children since the basal metabolic rate, blood cholesterol determinations and bone age are of relatively little value.

2. Total urinary output in twenty-four or forty-eight hours: This represents all of the iodine which is not taken up by the thyroid gland, except for a small fraction which is retained in other tissues of the body. The figures are therefore the converse of those mentioned for uptake and may be used as a check on uptake studies. Myxedema will cause high output in twenty-four hours while in thyrotoxicosis the output is low even after forty-eight hours.

3. The rate (gradient) of uptake and output: The gradient of uptake indicates rapidity and amount of I^{131} retained by the thyroid gland and is a valuable study in certain types of nonfunctioning goiter as well as in thyrotoxicosis. It has been reported that a high rate of excretion in the first two hours is characteristic of thyrotoxicosis although total urinary output will be low. It has also recently been demonstrated that the combination of a 35 minute gradient and a single urinary output determination most accurately detects the hyperthyroid state. Thyroid carcinomas will show a high initial gradient with a subsequent rapid and continuous loss of iodine, as reflected by repeated counts over the gland and urinary excretion.

4. Body Scanning: This is used to detect substernal and intrathoracic extensions of the thyroid gland; the presence of struma ovarii and other extrathyroidal concentrations of iodine; sites of metastases from thyroid neoplasms where iodine uptake has been induced in the metastases; and to determine the completeness of thyroidectomy at the time of surgery.

5. Directional counting: This is used to give the differential count over different areas of the thyroid gland, and especially to determine the activity of thyroid nodules. Nodules which have high counts as compared to the rest of the gland may be spoken of as "hot" nodules. These are rarely malignant and in older people may be the source of marked thyrotoxicosis and heart disease even in the absence of the usual clinical signs of toxicity. A normal or even low total uptake may be present in these individuals. Nodules which have low counts as compared with the rest of the gland may be spoken of as "cold" nodules. These may or may not be malignant and should be removed surgically. By means of directional counting, contour graphs of the gland may be made which accurately outline the size, shape and location of the gland or nodules. Subacute thyroiditis and Riedel's struma may show focal areas of increased and diminished I^{131} concentration although the total uptake is reduced.

INTERFERENCE WITH TRACER STUDIES

Certain drugs negate the value of tracer studies and should be taken into consideration in evaluating results. Lipiodol which contains free iodine, will destroy the value of tracer studies of I^{131} for periods of several months or as long as it remains in the bronchi. Gall bladder dye will do the same, but for periods of from three to six weeks only. Pyelogram dye, being more rapidly excreted, will alter the test for periods of only one or two weeks.

The presence of a high iodine content in the diet, such as fish dinner the night before the test, may destroy its value. Drugs containing iodine, such as cough medicines, inunctions and potassium iodide, also will interfere with the test for a period of from several days to a week or more depending upon the amount of iodine. Potassium thiocyanate and thiouracil derivatives interfere with the test for periods of one to two weeks by blocking the iodine uptake and synthesis of thyroxin respectively. Thyroid extract given to a normal individ-

Radioisotope Laboratory, The Menorah Medical Center and University of Kansas School of Medicine.

ual depresses the uptake of I^{131} by the thyroid gland by its inhibiting effect on the pituitary and on the thyroid gland itself. This effect will last for about three weeks if the extract has been given over a long period of time. Therefore uptake studies cannot be used to follow improvement in patients taking thyroid extract in the same sense that the basal metabolic rate reflects progress. Cortisone also depresses pituitary function and so inhibits I^{131} uptake. Severe kidney disease and cardiac decompensation, by slowing iodine excretion, may also alter the results of the test.

TREATMENT WITH RADIOACTIVE IODINE

The dose of radioactive iodine is determined by the size of the gland and also by the tracer uptake studies. Its value in the treatment of colloid goiter is nil and in the treatment of toxic nodules is still controversial. Its primary value is in the treatment of thyrotoxicosis due to diffuse goiter and also in toxic goiter recurring after previous surgery. Average doses for treatment are between .16 to .20 millicuries per gram of estimated thyroid weight.

After complete thyroidectomy, cancer of the thyroid of the follicular type can be induced to take up radioactive iodine and the metastases may be treated in this way. Some types of papillary adenocarcinoma have also shown iodine uptake function. However, all thyroid metastases should be investigated for I^{131} uptake after surgical removal of the gland.

FOLLOW-UP OF THE PATIENT

Following treatment of thyrotoxicosis with I^{131} effects are seen in about two weeks. The maximal improvement occurs between four to eight weeks with reduction in size of the thyroid gland and complete control of symptoms. Rarely, a temporary increase in symptoms of toxicosis may occur at about the second week, as the stored hormone is released by the injured gland. A period of temporary myxedema may occasionally occur at six to eight weeks until the damaged cells recover function, but thyroid extract should not be given since it will mask a spontaneous recovery. If the myxedema persists beyond this time it probably will remain permanently and thyroid extract should be given. Lugol's solution, potassium iodide or thiourea derivatives should not be given for at least six days following treatment with I^{131} since these will cause loss of the isotope from the gland. If there is any evidence of thyrotoxicosis after eight to twelve weeks, repeat doses of I^{131} may have to be given.

Advantages of isotope therapy in thyrotoxicosis may be enumerated as follows: (1) patients do not require hospitalization, (2) postoperative morbidity is avoided, including the danger of damage to the recurrent laryngeal nerve and parathyroid, and postoperative hemorrhage, (3) no time loss from work, (4) absence of a scar on the neck, and (5) cost of treatment is relatively small.

INTRACTABLE ANGINA PECTORIS AND CARDIAC DECOMPENSATION

Blumgart has reported great improvement in many cases of severe angina pectoris and cardiac decompensation or both by producing myxedema with radioactive iodine. This apparently decreases the demands on the heart by lowering the body metabolism. Small doses of thyroid extract are then given to lower the blood cholesterol in these individuals after myxedema has been attained.

BRAIN TUMORS

In brain lesions I^{131} labeled di-iodofluorescein is given intravenously and counts are made over the cranium in a symmetrical pattern. Since the tumors show an affinity for the isotope, the counter will pick up a concentration of counts over the involved area. This method has proven quite valuable in detection of brain lesions and presents an additional diagnostic tool. False positives will occur in encephalomalacia and inflammatory conditions involving the brain and its covering. P^{32} may be used in a like manner for accurate localization of the brain tumor at the time of surgery or in a manner similar to di-iodofluroscein, where it has a lower degree of accuracy. A needle-like Geiger counter is available for brain probing by the neurosurgeon at the time of surgery. Iodinated serum albumin is now also available and is believed to have some advantages over other methods.

RADIOACTIVE PHOSPHORUS: P^{32}

Polycythemia vera: It is now generally conceded that radioactive phosphorus is the treatment of choice for polycythemia vera. Its advantage lies in the fact that it depresses the platelet producing megakaryocyte as well as erythroid cells. Because of this, thrombophlebitis (as well as hemorrhage) becomes a much less frequent complication of this disease. Normal life span can be maintained in these individuals by treatment with P^{32}. The complications which may occur are leukopenia, anemia and thrombocytopenia, but all of these are reversible. An incidence of acute leukemia of about 3 per cent has been reported. Chronic leukemia, however, which prior to P^{32} occurred in from 10 to 17 per cent of cases has apparently been eliminated with this type of treatment.

P^{32} may be given intravenously or orally. If given by mouth it should follow an overnight twelve-hour fast with no food for three hours after the dose is given. Repeat doses may be given two to three months later, depending upon the blood count.

Dosage: The dosage schedule of P^{32} depends on the sensitivity of the hematopoetic system and on the rapidity of response to the initial doses which average between 3 to 5 millicuries.

Dangers: Since P^{32} is concentrated by young and rapidly growing cells, the danger of sterility in young people must be kept in mind because of

concentration of P^{32} in the gonads. For this reason the question of its administration to children should be carefully weighed.

The indications for the use of P^{32} in the treatment of chronic myelogenous and lymphatic leukemia are the same as those for the use of roentgen therapy: (1) systemic symptoms such as fever, malaise, (2) enlarged spleen and lymph nodes giving pressure symptoms, (3) increased leukocyte count coupled with a developing anemia or thrombocytopenia, and (4) symptoms of increased metabolic rate.

The response to adequate therapy with P^{32} in favorable cases is usually evident within two weeks and consists of symptomatic and hematologic improvement.

Diagnosis of malignancy: Since P^{32} is picked up by rapidly growing tissue, lymphomas in the chest or any malignancy involving the skin or lymph nodes may be detected where the tumor is not too deeply situated. This is true because P^{32} emits B-rays which can only penetrate a few millimeters of tissue. However, some secondary gamma radiation may be produced which permits localization of deeply seated tumors. Many carcinomas of the breast will take up P^{32} and may, therefore, be identified as neoplastic with localization of the tumor. Although positive findings are quite useful, negative results would not exclude the presence of a malignant tumor since all tumors will not necessarily concentrate radiophosphorus. This means of detection is especially useful in the poor surgical risk patient and is also useful in indentification of lymph node metastases from carcinoma of the breast. The use of P^{32} in diagnosis of brain tumors has been discussed under the heading, "Brain Tumors" in I^{131} studies. P^{32} has also been shown to be of value in the diagnosis of seminomas and retinoblastomas. Confusion may result in children in whom the diaphysis of growing bone will show greater uptakes for P^{32}. In combination studies with I^{131}, lymphoblastoma may be distinguished from substernal thyroid.

In those cancer cases in which avidity for P^{32} is great, this substance may be used as palliative therapy.

RADIOACTIVE GOLD: AU^{198}

Au^{198} has proven of palliative value in those cases of ascites secondary to ovarian carcinoma and in cases of effusion resulting from neoplastic involvement of the pleura. These conditions may be controlled by repeated injection of Au^{198} directly into the peritoneal and pleural cavity.

COBALT: CO^{60}

Co^{60} has properties similar to radium due to its energy emission. Since it is in a liquid state it can be used for intracavity application by filling various containers which will follow the outlines of the involved area. It has therefore been used in carcinoma of the bladder.

In addition it has been inserted into various types of plastic thread and then sutured into the cancer (i.e. neck glands) providing uniform radiation by this interstitial method.

These isotopes are some of the most frequently used elements. They provide both a diagnostic and therapeutic addition to the practitioner's armamentum. Because of the growing potential of radioisotopes and the interest of the public in them, all physicians should be acquainted with the uses and limitations of these materials.

Menorah Medical Center.
4949 Rockhill Rd.

BOOK REVIEW

AN ATLAS OF NORMAL RADIOGRAPHIC ANATOMY, by Isadore Meschan, M.A., M.D., Professor and Head of the Dept. of Radiology, University of Arkansas School of Medicine with the assistance of R.M.F. Farrer-Meschan, M.B., B.S. (Melbourne, Australia). Publishers W. B. Saunders Co., Philadelphia, Pa. 1951. Price $15.00.

In the preface the authors state that their purpose is to make convenient for the student a single compendium of normal radiographic anatomy which will include: (1) basic morbid anatomy as it is applicable to radiography; (2) the manner in which the routine projections employed in radiography are obtained; (3) a concept of the film so obtained; (4) the anatomic parts best visualized on these views; (5) changes with growth and development; and (6) some of the more common variations of normal. In this they have succeeded admirably.

Short chapters on the fundamental background for radiographic anatomy and the radiographic anatomy of the skeletal system are followed by fourteen chapters covering the upper extremity, pelvis and lower extremity, the skull, sinuses and mastoids, and the brain, vertebral column and subarachnoid space, respiratory system and mediastinum, special studies of the heart and major blood vessels, upper gastrointestinal tract, intestine beyond the duodenum, biliary tract, abdomen and peritoneal space, urinary tract and the genital system. The illustrations are outstanding. The method employed, which places a drawing of a patient in position for certain radiograph with a reproduction of that radiograph immediately below and on the opposite page a labelled tracing of the projection under discussion, is both convenient for the reader and highly instructive. The majority are still "eye-minded" with "1 picture being worth 10,000 words."

A complaint which might be advanced regarding the excellent tracings is that some of them are rather small in size for the abundant labels which are used. Fig. 244, labeled "Pulmonary Arteries and Veins," shows the bronchi rather than the veins. I also feel that the upper limits of 120 cc. of contrast media used in cerebral angiography with 20 cc. to each injection are too high and that present methods of changing cassettes rapidly render use of these larger amounts unnecessary.

This volume is recommended unreservedly to the student and resident as a valuable textbook and to the seasoned radiologist as a reference work, both in daily practice and in teaching residents and technicians.

A. B. S.

Postgraduate Review

THE MANAGEMENT BY THE GENERAL PRACTITIONER OF EMOTIONAL PROBLEMS OF CHILDREN

J. COTTER HIRSCHBERG, M.D.
TOPEKA, KANSAS

CHILDREN WITH emotional problems can be helped by the physician in general practice if the doctor utilizes the inherent strengths of the parent-child relationship to aid him in his work with such children. This paper presents one way of working with the child and his family in order to achieve this use of the strengths of the child and his family. Briefly, it involves three steps.

First, a simultaneous diagnostic evaluation of the parents and of the child in order to decide the degree of emotional illness in the child and the degree of modifiability in the parents' attitudes toward the child and his problems.

Second, the recognition of certain criteria which aid the physician in his decision whether to handle the problem himself or whether to refer the child and his parents to a specialist.

Third, if the general practitioner decides to handle the problem himself, then the major effort is directed toward helping the parents to modify their attitudes and feelings so that the normal process of the child's emotional growth and development can continue. The child is seen by the general practitioner only to establish and maintain a dependable, consistent, supportive relationship between the doctor and the child.

Let us examine why it is that in helping the parents to express their feelings about the child and his problems, and to release their angers, tensions and guilts, the parent-child relationship is strengthened and the child assisted to grow.

Normal personality development in a child depends largely upon three factors: First of all, the physiologic maturation and growth process within the child which provides the physical structure and the constitutional determinants for growth; secondly, the child's gradual differentiation from his parents which allows the child to develop as an independent entity with his own individualness, and, thirdly, the child's simultaneous and gradual achievement of new relatedness to both his parents and to others about him.

In an important sense, many emotional and behavioral problems of children are growth problems occurring in the child's relationship with those who provide the structure for his growth, that is, with his parents; and growth problems occurring in his relationship with others about him, that is, with the social setting as a whole. If a child's problems are viewed as an element in a larger family patterning, then the child's emotional difficulties can be considered as the result of distortions in this parent-child relationship. Moreover, even though the emotional conflict in the child were not due to adverse parental attitudes (as in the brain damaged child or in the mentally retarded child), the existence of conflict within a child will in itself result in certain disturbance of the parent-child relationship. In all children, the treatment of emotional disturbances requires an attempt to better the parent-child relationship.

Since treatment of emotional disturbances of children depends on the parent really wanting and accepting change in the child, a great deal can be accomplished in management of emotional disorders of children in the general practice of medicine by the use of supportive, non-directive, reflective comments with the parents. In such direct work with the parents one soon realizes that many parents come to the general practitioner eagerly seeking a "solution" to the child's problem. They want specific advice; they want immediate decision; they want help in the way in which the average person who comes to a physician thinks of help—namely, they want to be told what to do. This is particularly true because parents usually feel that the problem of the child is the result of something they as parents have or have not done. With this initial attitude, parents are going to be inevitably disappointed, because no physician or no psychiatrist can meet these false expectations with which the parents have come. Rather than attempt to provide answers for the parents, the general practitioner should encourage them to talk about the problem with the child as they see it, even though to the parents this frequently seems like a useless process.

However, in this process the parents can be given sympathetic support and a recognition of their feelings in needing to ask for help. By spending this time with the parents, the general practitioner will succeed in defining the child's problem in relation to the parent-child relationship. Gradually the parents' feelings of failure and inadequacy, the guilt of the parents over their need to ask for help, their feelings of responsibility regarding the child's problem, their fears of criticism—all these mixed and difficult feelings with which the parents of a child who is emotionally upset always struggle can be accepted by the physician as reasonable, as understandable, and as a part of their relationship with the child.

Although there are always unconscious conflicts underlying these conscious ones, still the most frequently verbalized reactions of the parents of emotionally disturbed children seen by general practitioners were the following: First of all, anxieties centering around the parents' feeling of be-

Director, Department of Child Psychiatry (including Southard School), The Menninger Foundation.
Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

ing unable to meet this child's particular needs. The emotional disturbance of the child made the parents feel less confident of their own handling of him. The parents felt strange because of the emotional upset of the child and felt less secure about their handling of him. A second verbalized reaction of these parents centered around guilts over the past care that the parents gave to the child, over the past hostile feelings which the parents had felt toward the child and over the failure of the child to improve as the parents had tried to help him. The third verbalized response of the parents centered around their hostility toward the child—a hostility that was mainly a reaction to the excessive demands of an over demanding child and to the parents' feeling that the child in some way had brought about this emotional problem deliberately or through his own wish.

However, parents also react with a number of unconscious conflicts, the most frequent being, first, deep feelings of guilt and self accusation. These feelings can be seen in the over protectiveness which the parents often show to the emotionally disturbed child by responding to the slightest need or the slightest demand of the patient, often to the neglect of other children and other members of the family. Deep feelings of guilt were often shown by these parents through their behaving as if the emotional problem in the child were their punishment by an unjust Fate, and as if the particular behavior problem was penance laid down upon them. Further, the deep feelings of guilt could be seen in the parents' frequent denial of the reality of any of the child's problems. They would often deny that the child was at all disturbed, stating that the problem was really the attitude of others in the neighborhood or in the school. Frequently also these parents had shopped from one physician to another before coming to the general practitioner of their present choice, really seeking support in their evasion of the reality of the problem rather than seeking help with it. A further unconscious conflict was the parents' hostility to the child and rejection of him, an unconscious attitude which was displayed by the parents' rigidity of the care toward the child, as seen, for example, in the parents who began bowel training in their infant at 6 weeks of age; by the parents' inconsistent handling of the child; or by the parents' meticulous adherence to the suggestions offered by the physician, as seen, for example, in the parents who maintained an unvarying three hour feeding schedule regardless of the infant's demands. These parents acted as if the child's emotional illness were a personal attack on them, or a personal injury to them.

To work effectively with the emotionally disturbed child, the general practitioner must come to know the parents as persons, to know the family situation and the family relationships and to help such parents to a better understanding of their needs and the child's needs. This is particularly true when the child is actually making some "use" of his illness for various "secondary gains" such as the extra attention which results from his emotional upset and which gratifies his dependency wishes; or such secondary gains as the child's achievement of domination over the family through his emotional upset; or such as his use of the emotional problems as an escape from whatever he does not like or as a way to express his dissatisfaction with the parents. Under these circumstances the demands that the parents may make on the physician are not really for therapy, in the sense of wanting true change in the child, but rather are another plea to some outside authority for assistance in punishing the child, or for help in limiting the expressions of his rebellion and his desires for emancipation and independence. Early in this process, the general practitioner will listen to the parents' feelings and attitudes because as the parents elaborate the problem that they are having with their child, the physician can gradually become aware of those feelings of the parents which are related to the problem and can then strive for a recognition by the parents of the feelings which are part of the problem that exists between them and the child. As these feelings are gradually recognized, the physician can help the parents identify the elements in the parent-child conflict which have aroused their anxiety, can help the parents to face these anxieties in discussion with him and even to correlate their current experiences with their own past experiences that they themselves had with their parents. In relating such past experiences the parents can sense the similarity of many of their present struggles to previous struggles which the parents themselves had in their own childhood. This does not mean that the focus of the parents on the present problems and the present relationship which they have with their child is not maintained. It means only that one adds to this the real dilemmas of the past attitudes and the past feelings of the parents, engendered by their own growing up process, which may be playing a role in their attempt to help their own child now grow up.

There is an abundance of rich case material in existence which offers vital evidence of the contribution of the parents to the emotional difficulties of the child. This, of course, is particularly true with the parents of adolescent children since the changes in physiologic growth and the accompanying emotional confusions reawaken in some parents their own unresolved conflicts and their own poorly integrated impulses. The parents react to such children with fright, resentment and curtailing of the growth impulses in the child, while unconsciously encouraging other kinds of aggression which permit the parents an opportunity to relieve their own neurotic conflicts. Szurek[7] has pointed out this hidden influence on the child's behavior, "Regularly the more important parent, usually the mother, although the father

is involved, has been seen unconsciously to encourage the amoral or antisocial behavior of the child. The neurotic needs of the parent whether of excessively dominating, dependent or erotic character are vicariously gratified by the behavior of the child, or in relation to the child."

There is the case of a mother who, having lost her parents in a tragic accident during her adolescence, was adopted by a succession of aunts and uncles. When she married, it was to a sickly, hypochondriacal, passive man, who warned her constantly that he was on the verge of dying. Two children were adopted by the couple after five years of marriage, a boy and a girl. The boy was a sickly child, who almost died in infancy because of severe diarrhea. During the ages of 4 and 5, the little boy ran away from home repeatedly. As he grew older, the mother increasingly sought to infantilize him. When both children were in adolescence, the mother took to her bed in the belief that she was dying, only able to become active again when several weeks passed and death did not come. When her child was brought to the clinic for treatment, the mother revealed her deep, all-pervading fears of loss, of fright at seeing her children grow up and leave her, saying that her constant verbalized threat to the children had always been, "Go ahead, run away, leave me, you will soon discover how lucky you are to have parents, as I never had." The deep hostility and resentment she felt toward her parents for abandoning her had to be reenacted and relived toward her own children repeatedly. Unconsciously she rejected and encouraged them to run away, reliving a traumatic experience for herself by taking away and then reaffirming her own and her children's dependency needs.

The helping process in such a case was to allow the mother to express her fears of dependency, of deprivation and her underlying resentment toward her adoptive children for possessing what she had not possessed as a child, and the opportunity to express within the protection of a warm, accepting relationship her own needs for dependency and for freedom from fear of losing people. Gradually one could help such a parent see that allowing her children to grow up, to emancipate, was not losing them, but rather regaining them in a different way. This is a real challenge to the task of modifying parental attitudes and of bringing less tension and conflict to the parent-child relationship.

Often, one sees dramatically how the parent is gratified by, yet fearful of the aggressive behavior of the child, placing the child in the confused, bewildered position of not knowing how to please his parents.

A mother told of her child's truancy, his stealing, his defiance of his teachers, his refusal to study, his running away several times from private schools. She told this, hardly able to exclude from her voice the exultant tone as she related her son's escapades. After each incident, the parents would visit the school, inevitably finding fault with the school itself, the way the school administered discipline or the methods of some teacher. After each stealing episode, they accepted their son's explanation of what had occurred, no matter how ludicrous. The child could sense in his parents their stamp of acceptance and, indeed, pleasure over his behavior. On the other hand, his mother's minor restrictions about his coming in at nine o'clock, her refusal to allow him to smoke, her insistence that he share with her his every confidence, bewildered and enraged him. To her physician, the mother related her fears of seeing in this child, "all of the seeds of rebellion I saw in myself toward my own parents." The child became an easy target for resentment and rejection by virtue of the special meaning he had for his parents. He was born seven months after mother and father eloped despite the protests of the maternal grandparents. The husband proved to be a cold, rigid person. The mother felt the child a burden, "I felt like a cow when I nursed him." Throughout his early years the child was aggressive, irritable. On entering adolescence, the mother demanded that he obey the same restrictions as always, feared his growing secretiveness and detachment from her, and sat with clenched hands at home whenever the child was absent, imagining that he was committing some dangerous act of aggression. As a profound indication of her fear of his growth to that point at which the child could retaliate for her extreme rejection, she stated, "I don't want him to move so far away from me that he will hurt me."

It is then not too difficult to see that these unconscious meanings inherent in the parent-child relationship make participation frightening for parents, as they see in themselves similar problems.

The physician in general practice can offer support in assisting the parents to endure change, to tolerate the pain of change, to tolerate the pain of losing their old, neurotic ways of gratifying themselves through the child and can assist the parent in emancipating and gaining freedom and independence from the infantile demands of the child. Where conflicts are so severe that this cannot be done, the door is shut to treatment by the general practitioner and other solutions must be sought. However, a referral of the case after spending this time with the parents is more likely to be a successful referral than if time had not been taken to evaluate the total problem. It must be remembered that the primary responsibility for the child in our society rests with the parents. Treatment in general practice goes along in respect of that primary responsibility.

As the general practitioner attempts to evaluate both the parent-child interaction and the child in order to decide whether to handle the problem himself or whether to refer the child and his parents to a specialist, he should ask himself four major questions: First, what needs in the child

are satisfied by the parents and what needs in the child are not so satisfied? Second, what needs in the parents are being satisfied by the child and what needs of the parents are remaining unsatisfied? Third, what is the equilibrium of parents and child and is this present emotional equilibrium (1) appropriate for the child's age, (2) compatible with continuing psychologic growth and (3) compatible with continuing social integration? Fourth, in what way do the child's symptoms give conscious or unconscious gratification to either parent? The general physician must have a thorough understanding of the clinical, dynamic and genetic diagnosis of the child's problem because without such understanding it is impossible for him to know whether to proceed to help the emotionally disturbed child by work with the parents, or to refer the case to a specialist. Although one is not going to be dealing in direct psychotherapy with the disturbed child, one still needs to understand what the dynamics of the child's illness are within the child himself. One must be well aware of the course of growth and development with which this child has struggled. One must have a thorough developmental history in order to evaluate properly the congenital endowment with which the child began and in order to evaluate the significant life experiences through which this child has passed. The total diagnostic formulation must include the understanding of the child's behavior at several levels.

At the reality level, the particular patterns used by the child in attempting an adaptation to his environment should be understood, and there should be some evaluation by the physician of whether these patterns of adjustment are essentially healthy and wholesome, whether they are pathologic, whether they are primarily defenses against the child's conflict with a realistically difficult environment or whether they have developed because of conflict which has already been internalized within the child's personality structure. This knowledge is particularly important because in order for general practitioners to work effectively with emotional disturbances in children by working with the parents alone, the physician must realize fully when the child's actions are such that they cannot be reached by this relatively simple technic. This is most often the case when such actions on the part of the child are determined by unconscious motivations.

In order to determine when a child's behavior is unconsciously determined, one can apply three criteria and if the behavior fits these criteria then it is not likely that the simple technic being discussed in this paper will be sufficient for a helping process with the child. These criteria are: Is the behavior unrealistic? Is the behavior inflexible? Is the behavior repetitive? When the answer to these questions is yes, then one is dealing with emotional problems which are determined by unconscious conflict and unconscious motivation, and one is dealing with a child whose principle conflicts have become internalized and in whom the behavior problem has already been made a part of the child's personality structure. One can further realize, if the answer to these questions is an affirmative one, that the child's present behavior patterns have originated out of the past events within the family structure more than they have through current problems in the parent-child relationship. It would then be obvious that an attempt to help this child by altering the present parent-child relationships will not significantly influence the emotional problem that the child is presenting. When one answers these three criteria in the affirmative it is realized that the emotional problems which this child presents, whether they are simple or complex, are emotional problems that will not be best handled within the realm of general practice but rather will require referral of the child and his parents to the specialist. It is important to realize that this decision is reached not on the basis of the particular personality problems, not on the particular behavior response that the child shows but, rather, on the degree to which the problem has been internalized and is unconsciously motivated. There is no one behavior response which in itself says this particular child requires deeper and more thorough going help. It is well known that any one particular causative factor may actually result in several quite different behavior responses on the part of the child, or that any one type of behavior response can be due to several causative factors. To make the meaning more clear, the death of a parent can call forth an entirely different behavior response from a child, depending on whether such a death occurs when the child is 2, or 5, or 9 years of age, or adolescent. Moreover, a symptom such as stealing can be the result of any one of several causative factors. To decide that the child's behavior is unconsciously determined and will not be helped by the process outlined, one must rely on the three criteria of inflexibility, repetitiveness and unreality. There is not even a characteristic behavior response to disturbance within the parent-child relationship. I have seen all of the following behavior patterns occurring as the result of a single type of disturbed parent-child relationship: First, hostility, aggression and disdain on the part of the child toward his parents; second, withdrawal and aloofness; third, dependent, demanding behavior; fourth, anxious and fearful behavior; fifth, depression with feelings of hopelessness on the part of the child, and sixth, denial by the child that there is any problem. All of these widely varying attitudes of the child have been seen as the result of similar parent-child disturbances. Thus one must really ask the basic question: are the child's adaptive patterns primarily in response to the child's conflict with a realistically difficult environment and a realistically difficult parent-child relationship, or are the child's adaptive patterns in response to an already internalized con-

flict within the child's personality structure? It is on the basis of the answer to this question that one will decide whether or not the technic of working with the parents will be of any help to this particular child and his emotional upset.

If the general practitioner decides to handle the problem himself, while he is seeing the parents he also and at the same time strives for a relationship with the emotionally disturbed child which is positive, dependable, consistent, reliable and always honest and realistic. The treatment help which the emotionally disturbed child receives from the general practitioner is more a matter of the physician's grasp of the present problem and his understanding of the child than any particular interpretation of the child's attitudes or problems. Through being understood, the child becomes better able to understand himself. This sense of understanding is particularly necessary for the emotionally disturbed child because he comes to the general practitioner with a number of fears.

First, he comes with a fear of the unknown. The child has little idea of what is expected of him or of what to expect from the physician. However disturbed a child may be, he is never seen by a doctor until some adult in his family group responds to his disturbance. Thus it is that the child never comes but is always brought for treatment. Even his choosing to continue to see the physician is more form than it is fact due to his realization of the strength of the parents and the parents' attitude toward him and toward his continuing treatment. Yet the child is usually capable of understanding the meaning of his coming to the doctor, and his desire for strength and stability in the physician is a constant one and his requests for privacy and confidentiality should be met. The child wants from the doctor a respect for himself as an individual, capable of making an acceptable and logical choice of behavior and attitude if the adults in his environment also use logical and acceptable approaches to his problem. Because of the child's fear of the unknown, the physician should be less energetic than the child. The physician is on hand to receive communications from the child, to learn and to clarify things for the child and for his own study of the child. Although the physician creates the atmosphere of acceptance, the child must be the doer. When the physician's anxiety results in his pushing the child, then the child's fear of the unknown becomes even more acute.

Second, the child comes to the general practitioner with some fears of injury. The doctor's office with its needles and its bandages all increase for the child the expectation of being hurt. More than this, the child's fear of injury has often been increased by the parents in the events preceding the child's coming to the doctor's office as, for example, by the not infrequent portrayal of the physician as a bogey man, as someone who punishes, and so forth.

Third, many children come to the doctor with a real fear of their own conscience, their attitude being that they are being brought to the doctor because they are bad. There are, of course, many origins for such a fear in children, such as, for example, guilts about real misdemeanors on their part, or guilts within the child about forbidden thoughts, wishes and desires, or guilts over hostile feelings toward the parents and even toward the physician himself.

Fourth, the child comes to a doctor with a fear of his own helplessness and dependency. The fact that the child is being brought to the physician often means to the child that he is facing a loss of parental support. The ordinary child endows his mother and father with magical powers of omnipotence and omniscience and he feels that their bringing him to the physician for help with his struggles is an example of their inability to help him and perhaps even an example of their loss of relationship to him. The fantasies of children, such as their identification with cowboys and with Superman are, partly at least, ways for overcoming feelings of inferiority. All children are more aware of inferiority at some times than at others and at such times are frequently oversensitive, feel inadequate and discouraged. The child brought to the physician for help may actually gain added feelings of inferiority through the child's feelings that his parents are disappointed in him and are bringing him to the physician in the hopes of achieving some change.

Obviously, all of these fears may be aggravated by, first, a disturbed parent-child relationship; second, the particular past experiences of this child, such as the past threats the parents have made of punishment, the past hostile, punitive behavior of the parents to him, or the loss of a parent by death or separation; third, recent life events which have created particular insecurity in this child, such as the birth or the death of a sibling; fourth, the particular stage of growth and development in which this particular child happens to be. There are periods in any child's life in which visits to the physician for whatever reason are painful and disturbing because of the particular period of growth through which the child is passing. This is especially seen in the very young child and in the child of 4 or 5.

What is the chief task of the general practitioner to whom a child is brought because of emotional problems? The chief task is a simple one, and yet one which may in its simplicity have many difficulties—the task being to diminish the child's anxiety about his emotional problems and about their effect upon the parent-child relationship. The physician does this through giving the child an opportunity to talk about his feelings, to talk about his emotional problems and to tell as much as he can about what the experience of coming to the doctor for help with these problems means to him. The physician needs only to consider the child as a person with his own rights

and with his own capacities to make decisions. In this way, the physician will give the child a clear understanding of his problems, inviting him to express his own opinions and his own choices regarding a particular dilemma. The physician will encourage the child to participate in his own planning for the particular care which he will receive in the management of the situation for which his parents have brought him. If possible, the physician allows the child to make some decisions within the limits of the medical treatment which is planned, tells the child simply and honestly why various steps in care are necessary and gives some explanation to the child as to what is being done or what is being planned. Many a child with emotional problems comes to the physician feeling psychologically rebuffed and let down by his parents. He expects not to be understood by the physician, and the struggle which he has had in the parent-child relationship often leads to distrust in the physician-child relationship. Since so often the very coming to the doctor is parent determined, so it is that the child tends to identify the physician with the parents and may thus erect obstacles to the successful work of the doctor with the child.

In addition to all these factors, there are four particular attitudes on the physician's part which can seriously impede his working helpfully with children. These are, first, an excessively over permissive or over protective attitude toward children. These seem to be the result of over identification with the child and with the child's dependent or hostile wishes toward the parents. Moreover, such over permissiveness or over protection can actually be an over compensation on the physician's part for basically rejecting feelings toward the child and the child's problems. On the other hand, over permissive and over protective attitudes can reveal a strong desire by the physician to be liked by the child and such an overly permissive attitude will frequently block the actual effective work of the physician with the child since the imposition of necessary limits as a kindly, helpful, realistic measure cannot be carried out freely but will be felt by the child as hostility when the other attitudes have been permissive.

The second attitude on the physician's part which can interfere is the attitude of competitiveness toward the child in which the physician is actually a rival with the parents to see who can achieve the greatest amount of growth for the child, and is a rival with the parents for the child's affection and response.

A third attitude on the part of the physician which interferes, is a hostile rejecting one toward the child. This hostile rejecting attitude may be the physician's response to the child's problems or to the child's strivings for a dependent relationship to the physician or may result when the child does not meet the physician's own needs by failing to progress adequately under the physician's care.

The fourth attitude is an intellectualizing one in the physician who seems unable to acquire an integration of feeling and intelligence in working with children. The physician with his scientific medical background and often with extensive reading of modern psychiatry may have his own difficulties in relating warmly in a giving manner to the child and tends instead to use over intellectualization in dealing with the child. In his interest in the fascinating dynamic content of the child he is apt to misuse his excellent diagnostic formulation because of his problem in acquiring a meaningful relationship. The treatment of the emotional problems of children by the general physician may fail not because it is dynamically inaccurate and not because it is intellectually unsound, but rather because it is emotionally inadequate.

The total process of work with emotionally disturbed children which I have been discussing has been an attempt to help the child utilize the positive resources of his family, of his parents and of his environment for development toward health. This means a recognition that the physician does not always have to do the job completely with the child and that something can be left to the positive interplay between the child, his parents and his environment. Effective work with children may be slowed if attention is directed only to the areas of conflict in the child. Attention to the conflict-free areas of a child is just as important in the general practitioner's work with him.

The kind of limited treatment work with children which I have been discussing has been practiced by experienced general practitioners in the past. It has been practiced, however, frequently with a heavy heart and with a feeling of frustration rather than with a conviction that such limitation when situationally and diagnostically indicated is the best thing that could be done. The approach which I have suggested may help the general practitioner handle emotionally disturbed children more realistically. However, it should not be abused as a cover for failures in diagnosis or for failures in therapeutic practice, or for failures to refer cases to the specialist when this in indicated. The physician must be aware of the individual child as a separate and distinct entity and beware of falling into the trap of stereotyping "children's reactions" or of stereotyping his own approaches so that he creates a pattern into which the child tries to fit, since, of course, it is a goal of many children to fit into any pattern offered them by adults in order to get along with them with the maximum personal gain.

The essence of treatment work with emotional problems of children by the general practitioner is to allow a child and his parents to break through the emotional impasse in their relationship so that the normal or healthy process of emotional growth and maturation may go on. Thus

it is that when the activities of the physician have reached a place where both the child and the parents arrive at some better understanding and greater satisfaction with each other, the physician is no longer necessary and the child can use his family, his home, his school and his community to work out his relationship with those who provide the structure for his growth. The aim of the physician is to resolve the conflicts that have interfered with growth and adjustment of the child, conflicts usually residing within the parent-child relationship and to resolve these conflicts to the point at which the child can progress spontaneously, creatively and happily in his own world, responding to external realities instead of inner conflicts.

2221 West Sixth St.

BIBLIOGRAPHY

1. Barker, Roger; Wright, B., and Gonick, M.: Adjustment to Physical Handicap and Illness: A Survey of the Social Psychology of Physique and Disability, Social Science Research Council, New York, 1946.
2. Doscher, Nathan: Adjustment of the Physically Handicapped College Student, Ment. Hygiene **31**:577-581, 1947.
3. Kubie, Lawrence: Motivation and Rehabilitation; Psychiat. **8**:69-78, February, 1947.
4. Seidenfeld, Morton A.: The Psychological Sequelae of Poliomyelitis in Children, Nervous Child **7**:14-28 (January) 1948.
5. Soden, William: Rehabilitation of the Handicapped; Ronald Press, New York, 1949. Especially 149-157 (Seidenfeld).
6. Stanfield, C. E.: Personality Repercussions of Anterior Poliomyelitis: A Review of Literature, Am. J. M. Sc. **213**: 109-114 (January) 1947.
7. Szurek, Stanislaus S.: Notes on the Genesis of Psychopathic Personality Trends, Psychiat. **5**:1-6 (January) 1942.
8. Young, Richard H.: The Patient's Attitude Toward Poliomyelitis, Ment. Hygiene **33**:262-270, 1949.

BOOK REVIEW

THE UNIPOLAR ELECTROCARDIOGRAM A CLINICAL INTERPRETATION, by Joseph M. Barker, M.D., Cardiologist, Yater Clinic; Associate Professor of Clinical Medicine and Special Lecturer in Physiology, Georgetown University School of Medicine; Director of the Heart Station and Visiting Physician, Georgetown University Hospital; Chief of Cardiology, Providence Hospital; Visiting Physician, Gallinger Municipal Hospital; Consulting Cardiologist, Arlington Hospital, Arlington, Virginia. Assisted by Joseph J. Wallace, M.D. Advised by Wallace M. Yater, M.D. Foreword by Frank N. Wilson, M.D. Appleton-Century-Crofts, Inc., New York. 1952. Price $10.00.

The first six chapters of this book deal with the fundamental aspects of the subject, including the various leads, electrical axis, Einthoven triangle and electrophysiology. The theory is presented in detail with the aid of 458 illustrations and diagrams. The need for intensive study and the absence of short cuts in acquiring knowledge of fundamentals is emphasized.

This section is followed by a presentation of bundle branch block, myocardial infarction, myocardial ischemia, ventricular hypertrophy, the auricular complex, the arrythmias, anomolous auriculo-ventricular conduction and miscellaneous clinical manifestations. A short discussion of the vectorcardiogram is presented. Bold face sentences are used frequently throughout the book. This should prove a useful text for students and physicians. R.V.P.

Advertisement

From where I sit
by Joe Marsh

Modern Art Takes a Licking!

Did you know we had a real artist in town? Yes sir! Handy Jackson was a contributor to the Sculpture Exhibition at the Fair last week.

His work was streaky pink and curved all around—sort of streamlined. Caused quite a stir. Nobody was sure what it was supposed to be, but some liked it and thought it was good art. Handy gave me the lowdown:

"Why, it was nothing but a piece of cattle salt our cows have been lickin' at for months. I just had it mounted. Fooled a lot of folks—one fellow even wanted to buy it!"

From where I sit, Handy's "modern art" just shows how some people can be led astray. Some even get to be "experts"—especially about the other fellow's business. They're quick to tell a man how to practice his profession . . . or even to interfere with his preference for a temperate glass of beer. Let's live and let live—not set ourselves up as the "model" for the other fellow.

Joe Marsh

Copyright, 1953, United States Brewers Foundation

When patients are sensitive to antibiotics

Case Report

CONCOMITANT PYLORIC OBSTRUCTION AND PERFORATION

SUGGESTED METHOD OF TREATMENT AND ILLUSTRATIVE CASE

THOMPSON E. POTTER, M.D.
ST. JOSEPH

In any consideration of pyloric pathology the literature is abundant with references to both pyloric obstruction and pyloric perforation. The surgical methods of treatment of either as a separate entity have become fairly well standardized over a period of many years. Recently Bertram[1] and Beattie,[2] among others, have reviewed the results of medical management alone without surgery in a series of cases of pyloric perforation, pointing out the favorable morbidity and mortality. As far as benign pyloric obstruction is concerned, the time honored surgical procedures of gastroenterostomy in adults and the Fredet-Ramstedt operation in infants have earned and kept their respective places in the armamentarium of treatment.

It is not too often that one encounters acute pyloric perforation in the presence of long standing, almost complete, pyloric obstruction. Such a syndrome presents grave problems in any type of management and, from the nature of the pathologic problems involved, it would seem that any rationale of treatment would have to take into consideration the best hope of successful outcome in such a condition carrying a potential of high morbidity and mortality.

The following case is concerned with just such a syndrome, and is illustrative in that it represents what can be considered as a logical approach to the handling of this condition from both a surgical and medical standpoint.

REPORT OF CASE

E. C., a white female, had been under my care since November 1948, at which time she was 59 years of age. Previous to that her past history had not been remarkable except for her then present complaint of gnawing epigastric pain after meals, present for about two weeks and relieved by eating and alkalis. There had been no previous operations, serious illnesses or injuries. Physical examination at that time was not remarkable except that a little epigastric tenderness was present. She was sent for a gastrointestinal x-ray series which showed an old duodenal ulcer with marked deformity of the cap and with reflex irritative disturbances pointing to renewed activity. No evidence of obstruction was present.

She was placed on a strict dietary and medical regime with marked symptomatic improvement. In January 1949 there was considerable improvement by x-ray as to the ulcer status with no evidence of obstruction, but marked cicatrix formation. The patient was not seen again until July 1949 for recurrence of slight pain. A gastrointestinal x-ray showed status about as before, without much evidence of irritability and no evidence of obstruction, although scar formation was marked. She was continued on her ambulatory ulcer regime.

Two years later, in August 1951, the patient was again seen with complaints of intermittent nausea and vomiting for the preceding three weeks with no special complaints of pain. A recheck gastrointestinal x-ray study showed a marked increasing constriction and deformity of the duodenal cap, secondary to scar formation associated with the previously observed ulcer. Only about a 2 mm. channel was present with a large six hour gastric residue. A gastroenterostomy was advised at that time but the patient refused.

On March 22, 1952, this patient (now 63 years of age) was seen at home with complaints of continuous vomiting for three days. However, there was no pain or abdominal tenderness. She was somewhat dehydrated and showed evidence of malnutrition and weight loss. Hospitalization for preparation for surgery as previously recommended was again advised but refused. About four hours later I was notified that sudden severe constant abdominal pain was experienced and on hospital admission it was evident that upper abdominal viscus perforation was present. This was confirmed by x-ray which showed a small amount of air under the diaphragm containing a fluid level compatible with a small perforation of the old duodenal ulcer.

Taking into consideration all factors, it was felt that she could not stand an immediate operation for closure of the perforation. Even if such should be done the obstruction would still be unrelieved and if any postoperative complications developed a gastroenterostomy could not be done. Immediate closure of the perforation plus gastroenterostomy or gastrectomy were also discarded as possible surgical procedures because of the patient's poor condition. The best procedure envisaged was medical treatment alone employing constant gastric suction, nothing by mouth, antibiotics, blood replacement and hydration—thus preparing her for a gastroenterostomy within a few days. She was in mild shock on admission with an elevated white count and differential, plus some degree of anemia.

With careful attention to body fluid regulation and small transfusions, her condition gradually improved. Abdominal signs disappeared, and the white count returned to normal by March 26, 1952. Careful laboratory check on protein, chlorides and CO_2 combining power kept her body fluids in balance. No facilities were available for checking potassium at that time, but this element was added to her parenteral fluids as a precaution.

On March 27, 1952, under general ether anesthesia with the patient in a much improved physical status a gastroenterostomy was done—utilizing as an adjunct an Abbott-Rawson tube which had been inserted into the stomach the night before. This tube replaced the Wangensteen suction drainage which had been constantly suctioning satisfactorily for the four days since admission. At operation there was no exudate or fluid present in the abdominal cavity. A few fine areas of filmy adhesions were present about the distal portion

of the stomach leading down to the cicatrized pyloric area. The anterior visualized portion of the stomach was somewhat red as if from recent infection and irritation. The stomach had been shrunken down to normal size by the continuous suction, and there was no evidence of edema of its wall. It was felt that in view of the recent pyloric perforation which had occurred somewhat posteriorly, it would be best not to disturb the pyloric area in this region where it had walled itself off. Hence an anterior gastroenterostomy in an isoperistaltic manner was done instead of the usual posterior gastroenterostomy. The distal tip of the Abbott-Rawson tube was threaded through the anastomosis into the distal loop of the jejunum. The abdomen was closed without drainage.

This patient did well postoperatively. She was given antibiotics, one blood transfusion and kept hydrated with parenteral fluids. Feeding was graduated progressively using the Abbott-Rawson tube and gastric suction was at first constant and gradually cut down. The tube was removed on the ninth postoperative day. She was discharged from the hospital on the fourteenth postoperative and nineteenth hospital day tolerating a soft bland diet. She has been observed at intervals since and has maintained good wound healing and good health. She tolerates a general type of diet without any symptoms. When last seen on January 14, 1953, about ten months after operation, she had gained about 15 pounds in weight.

DISCUSSION

Recent literature[1, 2, 3, 4] has recommended the use of medical management alone in the treatment of duodenal and pyloric perforation. Favorable results in early cases have been reported with no morbidity as against a percentage of postsurgical wound evisceration, subdiaphragmatic and subphrenic abscess and postoperative pneumonia. In addition, no mortality has been noted in one series.[1] Of course medical management alone probably has to be the method of choice in perforations at least of longer duration than eight to twelve hours.

It is not my purpose to argue against the time honored and accepted surgical treatment of acute perforation of the upper intestinal tract, but it is probable that medical treatment alone will offer a great deal to a patient, particularly if the general condition is such that immediate operation may have to be discarded as therapy because of extremely poor risk or other medical factors.

In this particular instance it was felt that immediate operation would be hazardous and dubious as to final accomplishment of desired results. The course of medical management instituted within one and one half hours of perforation appeared to give a good result and accomplished the desired ends. In addition, abdominal organ visualization at operation four days after institution of a medical regime showed a favorable pathologic status.

With the increasing statistical prevalence of the ulcer syndrome, a percentage of concomitant perforation and obstruction will undoubtedly be encountered. The considerations suggested as to treatment in these complications would seem to offer a patient so afflicted a greater chance of survival.

SUMMARY

1. Pyloric obstruction and perforation as concomitant complications of the ulcer syndrome may be expected in a percentage of patients with an underlying peptic ulcer entity.

2. Medical treatment of an acute perforation in the duodenal or pyloric area has its application in selected cases, and is particularly advisable if obstruction is also present.

3. Definitive surgery to relieve obstruction may be carried out more feasibly secondarily when the acute phase of perforation has been managed medically—and with improvement in the patients pathologic status and general condition.

4. Observations on the status of the abdominal cavity four or five days after medical treatment for an acute perforated peptic ulcer are presented.

5. A case report of successful management of concomitant pyloric obstruction and perforation is presented demonstrating the feasibility of the suggested methods of treatment in this hazardous syndrome.

731 Faraon St.

BIBLIOGRAPHY

1. Bertram, H. F.: Ann. Surg. **132**:1075 (December) 1950.
2. Beattie, A. D.: Brit. M.J. **2**:882 (Oct. 27) 1951.
3. Habif, D. V., et al: J.A.M.A. **144**:996 (November) 1950.
4. Truscott, B. McN., and Withycombe, J. F. R.: Lancet **1**:894 (May 13) 1950.

All Things to All Men—

Today's general practitioner is in no way a mediocre medical man. He is a doctor with a wide variety of experience and skills.

He must be conversant with countless phases of his patients' problems, and never ending in his own quest for greater knowledge and experience. His day is never done without its share of reading and reviewing, of study and learning.

He must be familiar with all the peculiarities and capabilities of his patients—all of the time.

He must know whom to call for help on problems his own experience does not cover in sufficient depth, to permit him to render sound advice to his patient.

He must have a basic knowledge of medicine and all its branches, plus some knowledge of research.

He must never let up in his drive to keep posted on new ideas, new approaches to old problems, new and fresh slants to medical public relations and the countless other facets of general practice that are constantly coming up and changing. His interest must never be limited.

A general practitioner must be a good team man, because it takes teamwork to do good medicine. This includes teamwork with his fellow general practitioner, teamwork with the specialist, teamwork with the hospital administrator, teamwork with the nurses, and teamwork with all his patients. For obviously, if general practice is a composite of everything in medicine, it is also a composite of all the people in medicine.—News & Views, *St. Louis Academy of General Practice Bulletin.*

"PREMARIN"

...*"sense of well-being"*...

Relief of menopausal symptoms was complete in practically 96 per cent of patients receiving "Premarin" and "General tonic effects were noteworthy..."*

"PREMARIN"® *in the menopause*

Estrogenic Substances (water-soluble) also known as Conjugated Estrogens (equine). Tablets and liquid.

*Perloff, W. H.: Am. J. Obst. & Gynec. *58*:684 (Oct.) 1949.

5309

Ayerst®

AYERST, McKENNA & HARRISON LIMITED • *New York, N. Y.* • *Montreal, Canada*

FIRST

F. T. H'DOUBLER, M.D.
SPRINGFIELD

Immediate Past President, State Board of Medical Examiners

THE MULTIPLE CHOICE examination is of recent development, and is entirely new to state boards of medical examiners. The Missouri State Board is proud to be the first to adopt this objective method of examination. It was used on applicants in 1952 and again in 1953 and found to be exceedingly satisfactory. Questions are given covering the various fields to be considered. For each question there are offered four answers, only one of which is correct. The examinee indicates his answer by filling in a square opposite the answer which he thinks is correct. A lead graphite pencil is used so that the mark will register later on an I.B.M. grading machine.

Various sheets are arranged according to the different subjects. To grade the papers it is necessary only to run them through an I.B.M., which does its grading without fatigue, impatience or prejudice. The examinee does not write a word; time saved in not writing is used in answering many more questions. In an essay type of examination, with ten questions, the examinee would be out of luck if he did not know answers to four questions. However, with the multiple choice examination the questions are numerous and arranged to cover the field. The student has a better chance to show that he knows something.

Heretofore, each examiner was responsible for two subjects. There are about 250 applicants a year, mostly at the close of the school year. If each paper has ten questions, that means 5,000 answers to be graded by one examiner. Fatigue certainly enters in and the grading is not even, but with the I.B.M. it is free from human frailties.

During four years of medical school, students fall into a certain pattern of standing. This is the result of daily classroom work and examinations, and is also modified by the intimate knowledge which the teachers have as to the students' personalities and character. Let us imagine the students of a class so lined up, according to their four year medical school standing. Then let them take the board examination. If the relative standings remain the same, one has perfect correlation. Such is not the case; the correlation falls below 100 per cent. Since we have in Missouri two medical schools whose seniors each year, almost *en masse,* take our examination, we have been able to compare the correlation (to the four year standing) of the multiple choice examination results with that of the essay type results. We found that the correlation is much higher with the multiple choice method. This has been found to be the case by all other agencies which use the multiple choice method and which have made this comparative investigation.

The method is thus fairer to the student—with things facilitated for the examiners. The cost is about the same as the allowance for grading essay papers.

The questions and proposed answers are furnished by the Professional Examination Service. They employ our best medical educators. The questions are being continuously revised. If one is ambiguous, or too many fail on it, it is ruled out and the paper regraded by running it again through the I.B.M. The Service grades the papers and sends us the results. They also statistically screen the results as to proper pattern. The State Board of Medical Examiners of Missouri is indeed pleased with this fine new advance in the manner of giving an examination.

406 Professional Bldg.

FROM NATURAL DISASTERS TO THE HYDROGEN AGE

CARROLL P. HUNGATE, M.D.
KANSAS CITY

THERE HAS BEEN a recent epidemic of natural disasters, particularly tornadoes, in concentrated areas of population, leaving severe destruction in their wake.

In the July 1953 issue of the *Michigan State Medical Journal* is an account of the Flint tornado. The author writes, in part: ". . . if you would ask me for the 'system' used in Flint, it could not be defined . . . no preassigned post for each doctor . . . yet, somehow, each one went where he could do the most good. . ."

In Waco, Texas, an analysis of the effectiveness of rescue operations revealed a long list of discrepancies. In Flint, apparently the medical profession performed in a superb manner, with little previous pre-Civil Defense Disaster planning.

The medical profession is rather unique in that they are always capable of lending proper assist-

ance, providing facilities are available and thoroughfares are open.

Preassigned posts for medical personnel in Civil Defense has been a debatable question. "Classification" is necessary because the casualties in disaster require, largely, a surgical approach, forcing certain specialists and general practitioners to assume a new role. Work to be done by each must be predetermined, or by "What am I supposed to do?" "Preassignment" to positions has been felt necessary due to the great need for assistance from ancillary groups. In addition, the very requirement of spreading physicians thin was thought to make preassignment essential.

With the advent of the Hydrogen Age, some of our "system" planning seems of the horse-and-buggy type. We will see a change in philosophy of Civil Defense, with greater emphasis placed on early alerts, and the evacuation of cities, particularly where wideopen spaces exist at the periphery of the metropolitan areas. This will bring new problems for metropolitan physicians, and for all rural physicians, regardless of their remoteness from the target city.

The evacuation of Kansas City, for example, would mean a great increase in the population from the Ozarks to the Iowa line and from Jefferson City to Salina, Kansas, creating problems of medical care and supply, epidemics, water, food and billeting.

We will see the breakdown of the problem of human protection into: cities not suitable for evacuation to be protected by bomb shelters; cities to be protected by evacuation, and combinations of both methods.

Democracy is challenged in this new age by a totalitarian state. The hour is late, but our efforts at the international control of nuclear weapons may still prevent the atomic blitz. The ingenuity of her people should bring America through this new menace to mankind.

Opinions stated are those of the author and not the official opinion of the Navy Department.

Captain, MC, USNR, Senior Medical Officer, Naval Air Station, Olathe.

All Things Come . . .

. . . The persons who wanted a four year school of medicine for Missouri have won a victory. The battle over location contributed to it by forcing a definite decision to get started. The proportions of the victory will be determined by the progress and influence of the school in the future.—Editorial, *Kansas City Times.*

Requiescat

. . . With the death of Senator Taft the medical profession loses a steadfast friend. He was an intelligent champion of sound legislation that was good for the doctors because it was first of all good for the whole country.—F. E. Wilson, M.D., *AMA Washington Letter.*

MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office—1117 Marshall Field Annex
Wednesday, 1-3 P. M.)
Telephone—Central 6-1162

Josef A. Kindwall, M.D.
Carroll W. Osgood, M.D.
William T. Kradwell, M.D.
Benjamin A. Ruskin, M.D.
Lewis Danziger, M.D.
Russell C. Morrison, M.D.
Homer V. Capparell, M.D.
LeRoy E. Bostian, M.D.

G. H. Schroeder, *Business Manager*

COLONIAL HALL—*One of the 14 Units in "Cottage Plan."*

Conclusive evidence

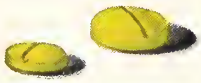
of the effectiveness and low toxicity

of Furadantin

in treating bacterial urinary tract infections

is provided in its recent

acceptance by the Council



FURADANTIN®

brand of nitrofurantoin

The N.N.R. monograph on Furadantin states:

"**Nitrofurantoin.—Furadantin (Eaton).—**

Actions and Uses.—Nitrofurantoin, a nitrofuran derivative, exhibits a wide spectrum of antibacterial activity against both gram-positive and gram-negative micro-organisms. It is bacteriostatic and may be bactericidal to the majority of strains of Escherichia coli, Micrococcus (Staphylococcus) pyogenes albus and aureus, Streptococcus pyogenes, Aerobacter aerogenes, and Paracolobactrum species. The drug is less effective against Proteus vulgaris, Pseudomonas aeruginosa, Alcaligenes faecalis, and Corynebacterium species; many strains of these organisms may be resistant to it. However, bacterial resistance to other anti-infective agents is not usually accompanied by increase in resistance of the organisms to nitrofurantoin. The drug does not inhibit fungi or viruses.

Nitrofurantoin is useful by oral administration for the treatment of bacterial infections of the urinary tract and is indicated in pyelonephritis, pyelitis, and cystitis caused by bacteria sensitive to the drug. It is not intended to replace surgery when mechanical obstruction or stasis is present. Following oral administration, approximately 40% is excreted unchanged in the urine. The remainder is apparently catabolized by various body tissues into inactive, brownish compounds that may tint the urine. Only negligible amounts of the drug are recovered from the feces. Urinary excretion is sufficiently rapid to require administration of the drug at four to six hour intervals to maintain antibacterial concentration. The low oral dosage necessary to maintain an effective urinary concentration is not associated with detectable blood levels. The high solubility of nitrofurantoin, even in acid urine, and the low dosage required diminish the likelihood of crystalluria.

Nitrofurantoin has a low toxicity. With oral administration it occasionally produces nausea and emesis; however, these reactions may be obviated by slight reduction in dosage. An occasional case of sensitization has been noted, consisting of a diffuse erythematous maculopapular eruption of the skin. This has been readily controlled by discontinuing administration of the drug. Animal studies, using large doses administered over a prolonged period, have revealed a decrease in the maturation of spermatozoa, but this effect is reversible following discontinuance of the drug. Until more is known concerning its long-term effects, blood cell studies should be made during therapy. Frequent or prolonged treatment is not advised until the drug has received more widespread study. It is otherwise contraindicated in the presence of anuria, oliguria, or severe renal damage.

Dosage.—Nitrofurantoin is administered orally in an average total daily dosage of 5 to 8 mg. per kilogram (2.2 to 3.6 mg. per pound) of body weight. One-fourth of this amount is administered four times daily—with each meal and with food at bedtime to prevent or minimize nausea. For refractory infections such as Proteus and Pseudomonas species, total daily dosage may be increased to a maximum of 10 mg. per kilogram (4.5 mg. per pound) of body weight. If nausea is severe, the dosage may be reduced. Medication should be continued for at least three days after sterility of the urine is achieved."

The NITROFURANS
A unique class of antimicrobials

EATON LABORATORIES Inc.
NORWICH, NEW YORK

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

"Yes, Man Descended . . ."

Every physician yearns to find the cause and cure of cancer, of poliomyelitis, of other dread diseases which attack us humans. And we are going to make this prediction: Someday, someone will find the answer to these major problems, and the answer will then seem ridiculously simple!

It is almost invariably true; everything in life which seems impossible to solve, when ultimately unraveled, follows the suggested pattern. The latest scoop on evolution, for instance, as recently explained in a lengthy article, is labeled, "A Tardy Bow to Darwin."

Any country boy, who has studied biology or comparative anatomy, certainly must have arrived at his own decision concerning evolution, unless his thinking processes were shackled by dogma. Every alert adult, after visiting a zoo and watching the antics of monkeys, in comparison with his fellowman, could point only to one matter of indecision: Who descended from whom? But, in particular, without claiming to be more than a superficial student of theology, we have always felt content that God created man, but men have made such monkeys of themselves in fighting about His *modus operandi!*

The news article mentioned indicates that leaders of practically all denominations in our country have agreed on the soundness of evolution. This is a remarkable change in thinking among ecclesiastical leaders, and has occurred only recently; we all know the battles which raged within the last twenty-five years.

However, probably the smartest document ever written on evolution is a poem, "The Monkey Says." In this, monkeys ask each other: "Whoever heard of a mother monk leaving her babies to bunk," and whoever heard of monkeys "using a gun or club or knife to take another monkey's life?" This simple, but intriguing, bit of jingle presents a philosophy with a profundity not superficially apparent in its satirical, comical cadences. It is far more enlightening than some of those ponderous, encyclopaedic researches, and ends this way:

"Yes, man descended, the onery cus,
But, brother, he didn't descend from us!"

VINCENT T. WILLIAMS, M.D.

Loyalty ⇄ Conscience

From Webster we derive the following definitions: *"Loyalty. Fidelity to a superior, or to duty. . . .*Syn. *Allegiance. Allegiance emphasizes the idea of objective obligation or duty owed."*

"Conscience. Sense of the moral goodness of one's own conduct, intentions, or character, together with a feeling of obligation to do or be that which is good."

By virtue of being engaged currently in an Alumni Fund drive, I have given some thought to the reasons that should impel an alumnus to give an appropriate measure of support to his Alma Mater. It occurs to me that if there were no other reasons for a Doctor of Medicine to give financial support to the medical schools of America, he would find sufficient cause to do so in the foregoing definitions. In a sense, loyalty and conscience are interchangeable terms in this connection, because both carry a connotation of obligation.

It has been interesting to hear the reasons advanced by those who contend that they will not or can not give. The hostile have personal reasons declaring that they were ill used in school, or affronted in one way or another afterward. Others offer no reason at all, indicating only that they are beset by that ominous apathy that is characteristic of such a large segment of the profession today.

It is not enough to be cognizant of the omnipresent threat of federal subsidy in medical education. The zooming costs of operation today men-

ace the standards and the independence of our medical schools, and make mandatory the active support of an alerted profession.

For those who have concluded that they will deny the claims of loyalty and conscience, I have a short message: an ill considered leap to a conclusion is provided with a slippery landing. The future of medical education lies in the wallets of those who would preserve its present level.

Jerome I. Simon, M.D.

Balderdash

They have us coming and going. We do not reach an earning stage until the thirties, and we start badly in debt.

When we get momentum it is at a relatively high level for a relatively brief time. We are thus compressed and caught on a high level of income tax which takes no account of our long days of preparation and expense.

We can not depreciate ourselves and we know only too well how we are wearing out. We are not allowed to set aside, tax free, funds on which later to retire—as corporations are allowed to do for their executive.

We pay our income tax and have no security other than what we build with our own saving and thrift. And yet the medical profession has been maligned for so many years that people, because of propaganda, envy us for our short period of deferred prosperity—if we gain it.

F. T. H'Doubler, M.D.

Recurrent Bowel Obstruction

To all concerned, the problem of recurrent small intestinal obstruction is an exasperating and maddening situation. Moreover, this condition is difficult for the physician to handle; it is expensive, dangerous and sometimes deadly to the patient. Altogether, any steps which may be taken to prevent recurrences are eagerly sought by everyone.

At the recent Toronto meeting of the Central Surgical Association, Weckesser (*Archives of Surgery,* October, 1952) reported the successful use since 1920, of plication of the small intestine when operating for obstruction due to adhesions. This procedure was originally reported by Noble at an earlier date.

The method consists briefly of suturing the bowel back and forth on itself in an orderly fashion, along the mesenteric margin. Thus, the bowel becomes adherent in this orderly, plicated pattern, rather than in a random fashion.

Weckesser warned: (1) to completely free all adherent loops of bowel, (2) suture adjacently along the mesenteric border, (3) begin and end sutures 3 cm. from each end to keep the turns in the gut at a gentle angle, (4) make the loops of proper length to fit freely in the peritoneal cavity (average 6 to 8 inches), (5) suture the bowel securely, using moderately heavy chromic catgut sutures, (6) close the folds of mesentery to prevent free loops of bowel from entering, (7) make adequate plication to cover all raw surface areas, (8) only plicate the involved bowel.

Edgar Poth, University of Texas, is another author who has reported similar success with the Noble plication operation.

We have used it in four cases, the oldest four years ago, and although two patients complained of mild cramps for several weeks, this all cleared up and they have remained asymptomatic. We have followed the practice of giving mineral oil daily to these patients, but doubt if this has been a factor in our uniform good results following this procedure.

It is the only method we know, to date, which offers the patient with chronic recurrent intestinal obstruction from adhesions some hope for permanent alleviation of this condition.

Avery P. Rowlette, M.D.

Others Say

Journalism vs. Medicine Again

. . . The press has been more than cooperative in publicizing our society. Recently, these relations have been strained. Remember, newsmen are instinctively inquisitive people and a bit of explanation will oftentimes help keep instances out of the news if you wish. It takes no longer to be cordial and polite. Let's all pause and see how we reflect in the mirror.—Editorial, *Pettis County Medical Society Bulletin.*

Boundary Lines Promote Inefficiency

An Emergency Call Program is a community need. Responsibility falls upon all the profession, and is not the task of a particular group. Geographic delineations exist...but those lines must be obliterated in community function. The eminent review expected in the Emergency Call Program is another example of need for closer integration between the City and County Medical Societies.—A. N. Arneson, M.D., *St. Louis Medical Society Bulletin.*

Fraternally Yours

Thanksgiving—for Freedom

As this is written, well ahead of publication, we can only assume President Ike will continue a middle-of-the-roader and will declare Thanksgiving Day on or about the same day it used to be. We never could understand why the date had to be changed around, anyhow.

But what does Thanksgiving Day have to do with physicians? For one thing, we should be thankful the New Deal and Fair Deal (socialists with a phony, attractive label) are not in power. Otherwise, by this time we would have a whole raft of legislation aimed at controlling the practice of medicine. Certainly, for this we can be most thankful.

We can be thankful that few of our young physicians will be away from home; most will be home helping care for the sick. And while we're on the subject of young physicians, have you thought lately on the "asking price" on these youngsters fresh out of their internships? We understand the "going rate" hereabouts is from 750 to 1,000 bucks a month! Seems kinda high, but from what we hear, they're hard to find even at that price.

We sometimes wonder if these youngsters realize that along with their opportunities, for which they should be thankful, there are certain penalties, duties and obligations attached thereto, especially in view of the folding dough they're asking for their services.

For instance, not long ago we overheard a neophyte asking what he would do about Saturday afternoon football games on radio and television. And, so far, his Thursday afternoons had been all cluttered up, *with work!*

Actually, many of our predecessors in medicine, as beginners, used to sleep and live right in their offices. You don't find many of them today, nor do we suggest that such is necessary or wanted. But, from such an extreme to the point at which the beginner screams if he doesn't get one or two half-days a week, with Sundays off, and he'd "rather not make night calls or take OB"—that certainly is getting medicine down to a forty-hour a week basis, and for a rather handsome salary, we'd say. As the song puts it, "It's Nice Work if You Can Get It," and we wonder if the kids are duly thankful.

As physicians in Missouri, we can be thankful for the inauguration of a new four year medical school program at the State University. Ultimately, this should whip the biggest, the number one medical problem in our state: better distribution of medical manpower. Moreover, we can be thankful that the tide of new men settling in small communities is now in a positive balance, again aiming toward the same end.

As good MoMedics, we should be thankful the other healing groups haven't completely run away with the ball in Missouri. Although a few end runs and off tackle smashes have threatened to score, we're still in there, battered but unbowed.

All Americans should be thankful we can see a glimmer of hope concerning what the tax man will leave behind in that mundane (but all important) field of economics. It still remains axiomatic the American people are being taxed right up to the ragged edge of what they can stand and still remain a free people...this same freedom for which we give thanks on Thanksgiving Day! "Not by bread alone" is a solid, satisfying mouthful, but this statement presupposes that the bread earner is able to provide, first of all, the "bread."

On this particular Thanksgiving Day, all Americans can be thankful for another thing. So far, we haven't felt the blitz of one or more of those atomic warfare gimmicks, which we Americans introduced to the technics of warfare in the name of humanity and Christianity. It was our gadget, you know. And, like the scared boy who throws a cigarette butt down in the barn and sees smoke curling out the window, so every American today, consciously or subconsciously, wonders: When is our cute little trick of ending wars liable to end us? Every physician of experience knows he is seeing more cases conditioned on fear, uncertainty and emotional instability than ever before. Ask our neuropsychiatrists, ask our general practitioners, ask any practitioner worth his salt in the field of psychosomatics! Indeed, we are poor, feeble fish to follow such a pattern, but that's the way it is.

How did the Pilgrims feel about their environment? Did they have worries, uncertainties, omnipresent dangers even as we have today? Didn't epidemics, floods, fires, scalping Indians threaten them and kill them just as dead as atomic energy? And, yet, they placed their faith in Him, to Whom we should all be thankful. And, by giving an honest day's work, they forged a mighty Nation, with unbounded opportunities, with attendant duties, responsibilities and obligations, for which we should be thankful on this Thanksgiving Day.

V.T.W.

On Our Own

It is in medicine as in the piloting of a ship—rules may be laid down, principles expounded, charts exhibited; but when a man has made himself master of all these, he will often find his ship among breakers and quicksands, and must at last have recourse to his own craft and courage.—John Brown, M.D., "Horae Subsecivae," 1861, Quoted in *Postgraduate Medicine.*

Missouri Medical Meetings

Sept. 27-Oct. 1: Kansas City Southwest Clinical Conference, Municipal Auditorium, Kansas City.
Oct. 12: Missouri Health Council Annual Meeting, Hotel Governor, Jefferson City.
Oct. 28-29: Missouri Academy of General Practice Annual Meeting, Hotel Governor, Jefferson City.
Dec. 1-4: American Medical Association Clinical Session, St. Louis.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Cass County Medical Society—meets quarterly on third Thursday of month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—first Monday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Holt County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets only on call.
Johnson County Medical Society—meets only on call.
Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Newton County Medical Society—meets only on call.
Nodaway-Atchison-Gentry-Worth County Medical Society—first Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month September through May.
Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Charles County Medical Society—third Thursday of each month.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.
Vernon-Cedar County Medical Society—meets only on call.
Webster County Medical Society—meets only on call.

Musings of the Field Secretary

Many youngsters and parents these days are asking "What does it take to be a Doctor?" Physicians are being invited quite frequently to appear before groups of young people in schools and study groups to discuss this important question. Dr. Walter C. Alvarez recently prepared an article entitled "Should Your Child Be a Doctor?" which was published in the *Ladies' Home Journal, Saturday Evening Post* and *Collier's*. The Association headquarters office has a number of reprints of this article which are available at your request.

A new television series of "The March of Medicine" is being presented this fall over more than seventy stations of the National Broadcasting Company and Canadian Broadcasting Corporation TV networks. This presentation is a joint project of the American Medical Association and Smith, Kline and French Laboratories. The program for October 8 was "Hope for the Heart Patient." On November 5 the telecast will be "A Report on the Fight Against Cancer" and on December 3 "Highlights From the American Medical Association Clinical Meeting in St. Louis." In Missouri these programs will appear at 9:00 p.m., C.S.T. over WDAF-TV in Kansas City, over KSD-TV in St. Louis. Your friends and patients may appreciate knowing about these attractions.

On November 5, at the Elms Hotel in Excelsior Springs, the Clay County Medical Society will hold its Annual Fall Clinical Conference. This inviting affair will get under way with a luncheon followed by a full afternoon and evening program of carefully selected scientific presentations. All members of the Missouri and Kansas State Medical Associations are cordially invited. The Clay County Society has gone all out this year to make this conference their best yet.

The American Medical Association sponsored Fourth National Conference on Physicians and Schools was held at Hotel Moraine-on-the-Lake, Highland Park, Illinois, September 30 to October 2. The registration reached the 200 mark this year and included, among others, representatives of: State and County Medical Societies, State and Local Health Departments, State Departments of Education, local Boards of Education, Public School Systems, Teacher Training Institutions and Parent-Teacher Associations. Purposes of the Conference were: To evaluate progress, to discover methods of working together, to explore administration technics and to agree on policies so that joint action may lead to the development of effective health services for school children, while recognizing the primary responsibility of each family for the health of its children. In the planning and delivery of effective school health services a general basic principle of democratic procedure needs be involved; namely, that

those who participate in a project should have some part in its planning.

The operation of the Conference was based on a discussion group technic. Twelve subjects selected from the general areas of school health service were studied by as many discussion groups. Those in attendance were given opportunity to select participation in the group discussing their particular interest subjects from the list of twelve. Each group made a summary report to the full conference at the final session.

Dr. Daniel B. Landau, Hannibal, Chairman, Committee on Infant Care of the Missouri State Medical Association, and Dr. Guy N. Magness, University City, a member of the same committee, officially represented the M.S.M.A. at this Conference. Yours truly made up the third member of the trio. Dr. Landau attended the group discussion on "The Physician as a Consultant in School Health Education," Dr. Magness the group on "School Health Service Problems in Large Cities" while I tried to be a sponge in the group discussing "Medical Society School Health Committees."

Other Missouri representatives at the Conference were: Dr. Lynn Garner and Freda K. Parks, R.N., Missouri Division of Health, Jefferson City, and Dr. Lloyd L. Tate, St. Louis Public Schools, St. Louis.

IN MEMORIAM

Bond, Van H., M.D., Hornersville, a graduate of Missouri Medical College, 1893; honor member of Dunklin County Medical Society; aged 84; died September 4.

Lewis, Andrew L., M.D., Sumner, a graduate of the Marion-Sims College of Medicine, 1898; honor member of the Chariton-Macon-Monroe-Randolph County Medical Society; aged 87; died August 25.

Brainard, Benjamin F., M.D., Martin City, a graduate of the University of Illinois College of Medicine, 1886; honor member of the Jackson County Medical Society; aged 89; died August 28.

Dyer, John H., M.D., Warrenton, a graduate of St. Louis University School of Medicine, 1892; member of the St. Charles County Medical Society; aged 85; died September 5.

Herron, W. Floyd, M.D., Aurora, a graduate of the University of Nebraska College of Medicine, 1901; member of the Ozarks Medical Society; aged 75; died September 6.

Ragan, Romulus C., M.D., Kansas City, a graduate of the Medico-Chirurgical College of Kansas City, 1903; honor member of Jackson County Medical Society; aged 86; died September 8.

DeLamater, Hasbrouck, M.D., St. Joseph, a graduate of the University of Alabama School of Medicine, 1901; honor member of the Buchanan County Medical Society; aged 83; died September 24.

Jost, William E., M.D., St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, 1906; honor member of the St. Louis Medical Society; aged 73; died September 18.

Soper, Horace W., M.D., St. Louis, a graduate of Washington University School of Medicine, 1894; honor member of the St. Louis Medical Society; aged 86; died September 28.

North Shore Health Resort

on the shores of Lake Michigan

WINNETKA, ILLINOIS

NERVOUS and MENTAL DISORDERS
ALCOHOLISM and DRUG ADDICTION

Modern Methods of Treatment

MODERATE RATES

Established 1901
Licensed by State of Illinois

Fully Approved by the
American College of Surgeons

SAMUEL LIEBMAN, M.S., M.D.
Medical Director

225 Sheridan Road

WInnetka 6-0211

Out of the Dark, a Red Grenade

Corporal
Duane Edgar Dewey, USMCR
Medal of Honor

It was an April night and the Marines, near Panmunjom, were under heavy attack. In one of E Company's machine gun emplacements, Corporal Duane Dewey and his assistant gunner lay on the ground, wounded. A Navy Medical corpsman was giving them aid. Out of the darkness, and into the group, lobbed a live Red grenade.

Although he was already seriously wounded, and in intense pain, Corporal Dewey pulled the aid man to the ground, shouted a warning to the other Marine and threw himself over the missile.

"I've got it in my hip pocket, Doc!" he yelled. Then it exploded.

By smothering the blast with his own body, Corporal Dewey had saved his comrades' lives.

"Now that I'm back in civilian life," says Corporal Dewey, "I sometimes hear people talk as though stopping Communism is a job only for our armed forces and the government. Believe me, it's our job, too. And one way we can both do that job is through saving and investing in United States Defense Bonds."

★ ★ ★

Now E Bonds pay 3%! Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semiannually when held to maturity. Also, all *maturing* E Bonds automatically *go on* earning—at the new rate—for 10 *more* years. Today, start investing in Series E Bonds through the Payroll Savings Plan; you can sign up to save as little as $2.00 a payday if you wish.

Peace is for the strong!
For peace and prosperity save with
U. S. Defense Bonds!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Members in the News

Dr. and Mrs. **Alton Brookerson**, Poplar Bluff, were hosts at a dinner honoring **S. S. Davis**, M.D., Dexter, on the latter's seventy-second birthday.

Clinton General Hospital has announced that the x-ray and laboratory facilities of the hospital will be administered by **A. E. Upsher**, M.D., Kansas City.

After six years practice in Harrisonville, **Harry B. Neis**, M.D., has terminated his partnership with **Edward S. Jones**, M.D., to open a practice in Olathe, Kansas.

Recently discharged from the Navy **Harry Wieman**, M.D., has begun practice in Joplin.

Immediately preceding the fall conference of the Southwest Clinical Society, the Mid-Continent branch of the American Psychiatric Association met in Kansas City.

The appointment, on a temporary basis, of **George Johns**, M.D. as superintendent of the Missouri State School at Marshall, has been made permanent by the state division of mental diseases.

A check for $10,874.74, proceeds from the 1953 Kansas City Open Golf Tournament, was presented to the Mercy Hospital, Kansas City.

At a recent meeting of the American Urological Association, South Central Section, **Irwin S. Brown**, M.D., Kansas City, was elected secretary-treasurer, **R. Lee Hoffmann**, M.D., Kansas City, representative to the executive committee, and **Grayson Carroll**, M.D., St. Louis, representative to the national editorial board.

Evarts A. Graham, M.D., St. Louis, has recently been elected president of the International College of Surgeons.

The seventh in a series of unexplained bombings in Kansas City occurred in the office of Drs. **Hugh Hamilton**, **Webb Alsop** and **Robert Higgins**. None of the three were injured.

The Eighteenth Annual Meeting of the Mississippi Valley Medical Society, held in Springfield, Illinois in October, was more than adequately attended by MoMedics. Among those participating as scientific exhibitors were **Willard Bartlett**, M.D., St. Louis, ("Uncommon Obstructions of the Major Bile Ducts"), **Joseph C. Edwards**, M.D., St. Louis, ("Essential Hypertension"), **F. X. Paletta**, M.D., St. Louis, ("Rehabilitation of Cancer Patients"), and **Robert Dean Woolsey**, M.D., St. Louis, ("Mechanism of Neurological Symptoms and Signs in Spondylolisthesis"). Scientific papers were presented by **Joseph A. Bauer**, M.D., and **Melvin A. Roblee**, M.D., Clayton, and St. Louis members **John J. Hammond**, M.D., **Carl E. Lischer**, M.D., **Robert John Mueller**, M.D., **Henry E. Oppenheimer**, M.D., **F. X. Paletta**, M.D., **John A. Saxton**, M.D., **Joseph E. Von Kaenel**, M.D., **Theodore E. Weichselbaum**, M.D., **Robert Dean Woolsey**, M.D., **Alfred Goldman**, M.D., **Alphonse McMahon**, M.D., **Don C. Weir**, M.D., and **Daniel L. Sexton**, M.D. Moderator of a Round Table Luncheon was **William A. Bloom**, M.D., Fayette. Along with presidents of Iowa and Illinois Medical Societies, Missouri State President, **E. Claude Bohrer**, M.D., West Plains, heard Assistant Secretary of Defense **Melvin A. Casberg**, M.D., speak on "The Health Professions and National Defense."

William C. MacDonald, M.D., **Willard Bartlett, Jr.**, M.D., and **Julius Jensen**, M.D., St. Louis, were recipients of fellowships in the Mississippi Valley Medical Society. Dr. Jensen also participated in a symposium on medical writing and was awarded a fellowship in the American Medical Writers' Association.

At the American Fracture Association meeting in California, papers were given by **A. H. Diehr**, M.D., St. Louis, and **Garrett Pipkin**, M.D., Kansas City.

A fire, causing an estimated $100,000 damage, occurred in early fall at the Kansas City home of **Marvin Bills**, M.D.

Marking the one hundredth anniversary of the establishment of the Sappington School Fund, the Saline County Historical Society's annual picnic was held at the William B. Sappington house. The house, built in 1844, is now the country home of **John R. Lawrence**, M.D., Marshall.

The Commerce Club of Savannah sponsored an open house in late summer in honor of fifty years of active medical practice by **Ralph R. Kelley**, M.D., Savannah.

Rotarians of Cape Girardeau heard an interesting and informative talk on modern medicine progress by **Wm. O. L. Seabaugh**, M.D., of that city.

A special feature of a late summer Sunday edition of the Sedalia *Democrat* was an article on the Bothwell Hospital blood bank. The operation and administration of the blood bank was stressed, with particular emphasis being placed on the fact that the Bothwell unit is autonomous and has no connection with other blood banks.

Ava physician **W. M. Owen**, M.D., has closed his offices in that city to take charge of the Blytheville, Arkansas, hospital.

Requests from state hospitals at Farmington and Fulton have been sent to Circuit Court Judges in surrounding areas, asking that admissions to the hospitals be sharply limited due to overcrowding and inadequate staffing of the state institutions.

Psychiatrist at the newly opened unit at Children's Mercy Hospital, Kansas City, which opened in early fall, is **Arthur H. Chapman**, M.D., formerly with the U.S.P.H.S. in Texas.

Marcel Mooney, M.D., Kansas City, and Richard Ayres of Topeka were winners of the open pair championship at the Northern Missouri bridge tournament in Chillicothe.

Professor of Pathology, **John P. Wyatt**, M.D., has been awarded an American Cancer Society grant for further research at St. Louis University.

At Nevada, the West Central Missouri County Medical Society heard papers by two Kansas City physicians. **Herbert J. Rinkel**, M.D., discussed "The Recognition of the Allergic Patient" and **Stoughton F. White**, M.D., spoke on "Surgical Indications in Renal Diseases."

Formation of a new partnership was announced by Doctors **B. H. Brasher** and **Joe Ward**, Lexington. In conjunction with this, the physicians moved into a new suite of offices.

Also a new partnership in new quarters includes **Ralph Jones**, M.D., a Marshall native, who has returned to that city after practicing in Sweet Springs. Dr. Jones has associated with **Robert W. Kennedy**, M.D., and **James A. Reid**, M.D.

Springfield's **Charles Lockhart**, M.D., has returned from Colorado, where he participated in the Penrose Cancer Seminar. He and Mrs. Lockhart vacationed briefly in and around Colorado Springs.

Washington University Medical School Dean, **Robert A. Moore**, M.D., has been named to the post of vice chancellor of the schools of the health professions at the University of Pittsburgh. The chancellor of the University stated that the appointment "brings to a close a nationwide search for a man to unify the elements of the University of Pittsburgh medical center and to develop further its rapidly expanding program."

The annual "Three D's Picnic" (doctors-druggists-dentists), sponsored by the Nigro Clinic, Kansas City, was held the end of September. Recipients of honor awards for "long, outstanding community service" were **Rush E. Castelaw**, M.D., **Charles W. Keeling**, D.D.S., and George L. Morton, Ph.G. For "outstanding service in the State of Missouri" a special award was given to J. Doyle Norris, St. Joseph pharmacist. Conwell Carlson, Medical Editor of the *Kansas City Star*, was named Medical Newspaperman of the Year.

David W. Robinson, M.D., Kansas City, attended a meeting of the International College of Surgeons in Lisbon in September. Early in October he spoke to a meeting of plastic surgeons in Stoke, England.

"Psychiatry and General Practice" was the topic of the paper **Paul Hines**, M.D., Kansas City, delivered at a meeting of the Chariton-Macon-Monroe-Randolph Counties Medical Society.

The opening session of the popular Jackson County Health Forum was held early in the fall. The audience heard "How to Stay Well" described by **William A. Sodeman**, M.D., new chairman of the department of medicine at University of Missouri Medical School.

First on the fall schedule of medical meetings was the sectional meeting of the American Urological Association held in Kansas City. MoMedics participating in discussions included **Carroll Grayson**, M.D., and **Robert V. Brennan**, M.D., of St. Louis; Kansas City members **William Valk**, M.D., **Andrew Mitchell**, M.D., **Mark Dodge**, M.D., **Lloyd Stockwell**, M.D., **William Leifer**, M.D., **George Aaron**, M.D., and **Sidney Rubin**, M.D., presented papers or had exhibits at the meeting.

A $50,000 bequest to the Kansas University Endowment association for cancer research was announced. The fellowship was donated by Mrs. Martha E. Lewis, a native of St. Joseph, Missouri.

Leo V. Mulligan, M.D., St. Louis, was the featured speaker at the September meeting of the Greene County Medical Society. Dr. Mulligan's subject was "Observations in the Treatment of Portal Hypertension."

Medical director, **Lawrence W. Hart**, M.D., of Children's Mercy Hospital, Kansas City, attended the International Academy of Pediatrics in Havana and the American Academy of Pedatrids in Miami in October.

"Treatment of Diabetes During Acute Complications" was discussed at the September meeting of the Buchanan County Medical Society, by **Henry E. Oppenheimer**, M.D., President of the St. Louis Clinical Diabetes Society.

Various civic projects of the Washington, Mo., Junior Chamber of Commerce, have resulted in a new blood refrigerator for the St. Francis Hospital.

Recently returned from service in Munich, Germany, **Robert E. Dunshee**, M.D., is establishing practice in Maryville.

"Normal Electronic Dispersion the Essence of Life," was the subject of a paper delivered by **Roy M. Keller**, M.D., Sedalia, at the 39th annual convention of the American Association for Medico-Physical Research held in Chicago.

James F. Maddux, M.D., Kansas City, has been appointed new medical director and staff psychiatrist of the Sheltering Arms Child Guidance Center, St. Joseph. Dr. Maddux is also regional consultant in psychiatry for the United States Public Health Service.

Posies to **D. C. Dodd**, M.D., St. Louis, who gives, free of charge, a half day of his time each day to care for handicapped people at Goodwill Industries.

Principal speaker at a Joplin meeting of the Missouri Medical Secretaries and Assistants was **S. W. Scorse**, M.D., Joplin.

Various grants totalling $40,645 have been made to the University of Missouri Medical School, to further research studies.

The home of Dr. and Mrs. **Frank J. Koenig**, Kansas City, was ransacked while the couple was vacationing in Rome.

A portrait of the late **E. H. (Ned) Skinner**, M.D., was unveiled in the Library of the History of Medicine at the University of Kansas Medical Center.

Plans are underway in Cameron for a $100,000 fund raising campaign to enlarge the Cameron Community Hospital.

Rolla physician, **Guy V. Everist**, M.D., is closing his Rolla office to establish practice in California.

A new seventeen-county free heart clinic has been opened in St. John's Hospital, Springfield. The clinic is being sponsored by the Ozark Regional Heart Association and is controlled by the Greene County Medical Society.

G. Wilse Robinson, Jr., M.D., Kansas City, has been reelected Editor of the *Mid-Continent Psychiatric Association News Bulletin.*

At the October meeting of the Parent-Teacher's Unit of the Greater Kansas City Foundation for Exceptional Children, **Louis H. Forman**, M.D., spoke on "Mental Health Attitudes of Parents."

"Civil Defense" was the topic of the lecture presented by **Carroll P. Hungate**, M.D., Kansas City, at the semi-annual course on "The Medical Aspects of Modern Weapons and Radioactive Isotopes" at the National Naval Medical Center, Bethesda, Maryland.

At the annual meeting of the Missouri Division of the American Cancer Society, held in Jefferson City, in September, **Terry E. Lilly, Jr.**, M.D., Kansas City, was elected to the Board of Directors.

Appointed by Gov. Phil M. Donnelly to the state health division's hospital advisory council are **H. W. Carle, Jr.**, M.D., St. Joseph, and **Arthur D. Markel**, M.D., Poplar Bluff. They succeed **R. S. Minton, M.D.**, St. Joseph, and **Walter L. Brandon**, M.D., Poplar Bluff.

NEW MEMBERS

Baker, Warren C., M.D., Savannah
Campbell, John G., M.D., Steelville
Fair, William L., M.D., Chillicothe
Fuzzell, James, M.D., Kennett
Lovinggood, Tom, M.D., Cape Girardeau
Montello, Samuel A., M.D., Kansas City
Roberts, Paul A., M.D., Sweet Springs
Slickman, R. A., M.D., Appleton City
Walden, Richard, M.D., Bourbon
Wieman, Harry K., M.D., Joplin
Worley, Charles A., M.D., Sweet Springs

Cook County Graduate School of Medicine

Postgraduate Courses

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting November 9, December 7, 1953, January 18, 1954
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting March 1, 1954
Surgical Anatomy & Clinical Surgery, Two Weeks, starting March 15, 1954
General Surgery, Two Weeks, starting April 26, 1954
Surgery of Colon & Rectum, One Week, starting March 1, 1954
Fractures & Traumatic Surgery, Two Weeks, starting March 1, 1954

GYNECOLOGY—Intensive Course, Two Weeks, starting February 15, 1954
Vaginal Approach to Pelvic Surgery, One Week, starting March 1, 1954

OBSTETRICS—Intensive Course, Two Weeks, starting November 2, 1953, March 1, 1954

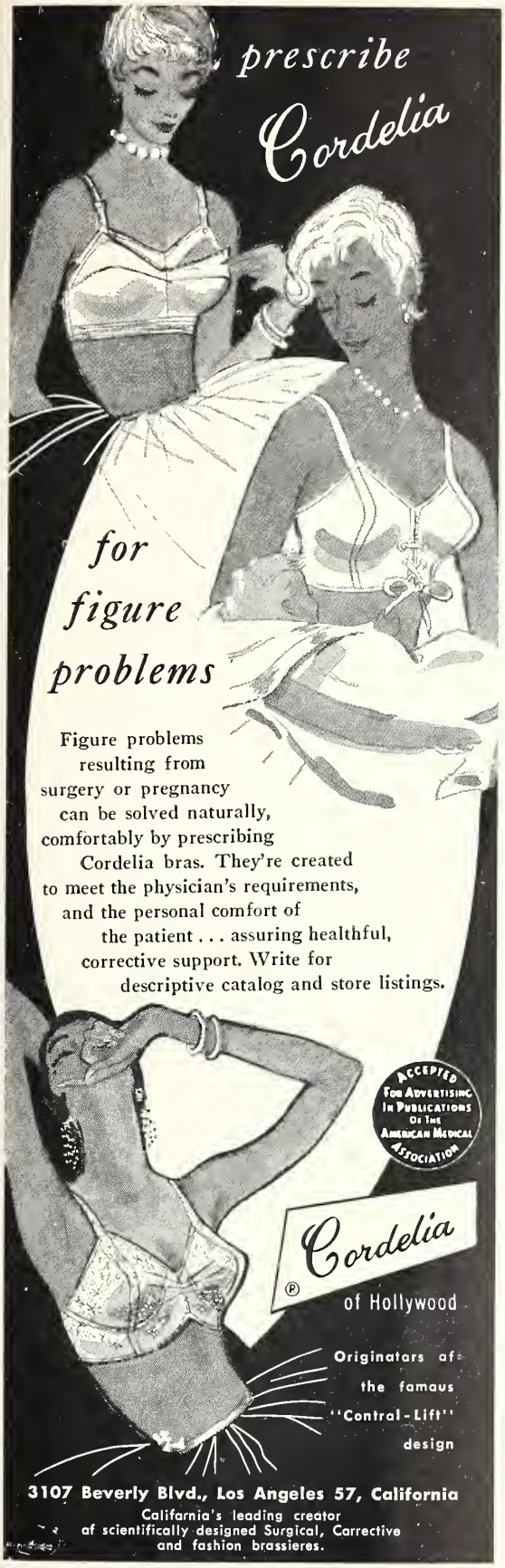
MEDICINE—Electrocardiography & Heart Disease, Two Weeks, starting March 15, 1954
Two-Week Intensive Course starting May 3, 1954
Gastroscopy, Two Weeks, starting March 8, 1954

DIAGNOSTIC X-RAY—Clinical Course every week by appointment

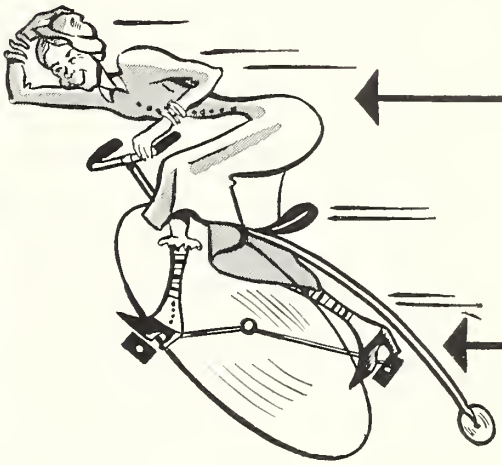
CYSTOSCOPY—Ten-day practical course starting every two weeks

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.



Times change



but the mark of a good pharmaceutical house

PAUL B. ELDER CO. BRYAN, OHIO

is remembered for generations

American Medical Association Will Meet in St. Louis

About 3,500 physicians are expected to attend the seventh annual Clinical Session of the American Medical Association in St. Louis, December 1 to 4.

James R. Reuling, M.D., Bayside, New York, Speaker of the American Medical Association House of Delegates.

The program is designed to give the general practitioner an opportunity to see and hear the latest developments in medicine. Papers by outstanding physicians in their respective fields will cover such topics as internal medicine, surgery, pediatrics, obstetrics and gynecology, tuberculosis and other diseases of the chest, cardiovascular diseases, arthritis, dermatology, gastrointestinal diseases and neuropsychiatry.

A feature will be an exhibit symposium on the prevention of traffic accidents. This will include the responsibility of the physician in telling his patient when he should not drive and what other precautions he should take in special situations, such as the testing of the drinking driver and in the care of the injured after an accident. Cooperation of such agencies as the National Safety Council and the police departments will be discussed.

Other special features include fracture demonstrations; problems of delivery, with manikin demonstrations by leading obstetricians, and diabetes, including exhibits and question-and-answer conferences.

All scientific activities will be held in Kiel Auditorium, where there are ample facilities for the lecture program. The Scientific Exhibit of about eighty displays will be correlated as far as possible with the clinical presentations. The Technical Exposition will consist of about 165 exhibits covering all types of office and medical practice needs.

Arrangements have been made for color television to be presented through the cooperation of Smith, Kline and French Laboratories. A motion picture program covering all the important problems which face the general practitioner also will be presented. These will be shown continuously, with the authors present, whenever possible, to discuss their work.

The House of Delegates will meet in the Jefferson Hotel, which will be the headquarters. Every physician should make an effort to attend one or more of these sessions in order to gain better knowledge of how the American Medical Association functions.

Edward J. McCormick, M.D., Toledo, Ohio, President of the American Medical Association.

Dr. Llewellyn Sale is chairman of the Local Committee on Arrangements, and Dr. Daniel L. Sexton is chairman of the Program Committee.

Southwest Clinical Pat on the Back

The nearest thing modern day physicians have to the old style sessions around the cracker barrel in the country store is the conference clinic. The atmosphere is informal and the give and take of ideas is substantial. . . . Southwest Clinical was one of the first of its type organized in the United States. Its usefulness has continued. . . . It has kept full pace with medical science, so that the society still ranks among the foremost in the nation.—Editorial, *Kansas City Star.*

50 *and six*

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

The

RALPH

SANITARIUM

Established 1897

Ralph Emerson Duncan, M.D.
DIRECTOR

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Clay County Medical Society

The Clay County Medical Society met in regular session with the Auxiliary at the Colonial Hotel, in Liberty, on Tuesday, September 15, 1953. A lovely dinner was served at 6:30 p.m. Seventeen members and their wives were present.

Dr. Earl Hobbs, Smithville, was responsible for the Scientific Program. Dr. Herbert L. Mantz, Kansas City, spoke on "Various Chest Conditions."

Final plans were made for the Clay County Medical Society's Clinical Conference to be held on Thursday, November 5, at the Elms Hotel in Excelsior Springs.

On November 4 at 8:00 p.m. at the Glenn Lewis School in Excelsior Springs a public meeting is to be held in conjunction with the Clinical Conference. The Speaker is Dr. Wayne Hart, Medical Director (in charge of Pediatric Residency training) and Pediatrician at the Children's Mercy Hospital in Kansas City. His subject is to be "Poliomyelitis."

S. R. McCracken, M.D., *Secretary*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Marion-Ralls-Shelby Counties Medical Society

Twenty-five physicians attended a dinner meeting of the Marion-Ralls-Shelby Counties Medical Society at the Mark Twain Hotel, Hannibal, on Tuesday night, September 22, and were privileged to hear a two hour scientific program furnished by the Missouri Academy of General Practice as follows: Dr. Charles Doyle, St. Louis, "New and Better Methods in the Varicosities," Dr. Roy V. Boedeker, St. Louis, "Indications for Pelvic Surgery With Special Reference to the Uterus and Ovaries."

R. J. Lanning, M.D., *Secretary*

Chariton-Macon-Monroe-Randolph County Medical Society

Robert Bollinger, M.D., Kansas City, spoke at the October 8 dinner meeting of the Chariton-Macon-Monroe-Randolph County Medical Society at the Woodland Hospital, Moberly. He discussed "Calcium and Phosphorus Metabolism."

C. C. Cohrs, M.D., *Secretary.*

FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

Lincoln-St. Charles Counties Medical Society

A meeting of the Lincoln-St. Charles Counties Medical Society was held at the Southern Air, Wentzville, on Thursday night, September 17. Nineteen members and guests were in attendance. The meeting was called to order by the President, Dr. H. C. McMurray, Wentzville, following dinner.

The scientific program was arranged by the Missouri Academy of General Practice and consisted of an interesting discussion of "The Clinical Features and Diagnosis of Carcinoma of the Pancreas and Chronic Pancreatitis" by Drs. Wm. A. Knight, Jr., and Gene B. Starkloff of St. Louis.

During the session the application of Dr. Rugh of St. Charles, for membership in the society was approved.

J. C. Creech, M.D., *Secretary*

SIXTH COUNCILOR DISTRICT

C. G. STAUFFACHER, SEDALIA, COUNCILOR

Joint Meeting of Henry, Pettis and Saline County Medical Societies

Thirty physicians attended a joint meeting of the Henry, Pettis and Saline County Medical Societies at the Bothwell Memorial Hospital, Sedalia, on Wednesday night, September 16.

The scientific program was worked out in cooperation with the Missouri Academy of General Practice and was as follows: Dr. John Growdon, Kansas City, "General Consideration in Preoperative and Postoperative Care of the Surgical Patient"; Dr. Joseph C. Williams, Jr., Kansas City, "Diagnosis and Treatment in Dysmenorrhea and Functional Uterine Bleeding."

Ray Hollingsworth, M.D.,
Chairman for the Meeting

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski-Maries County Medical Society

Thirty members and guests attended a dinner meeting of the Phelps-Crawford-Dent-Pulaski-Maries County Medical Society in Rolla on Thursday night, September 24.

The scientific program was arranged in cooperation with the Missouri Academy of General Practice and presented by Dr. R. O. Muether, St. Louis, and Dr. Oscar P. Hampton, Jr., St. Louis. Dr. Muether spoke on "The Present Status of ACTH and Cortisone"; Dr. Hampton discussed "Principles in the Management of Open Wounds of the Hand."

M. K. Underwood, *Secretary*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Tenth Councilor District Meeting

There will be an evening dinner meeting of the physicians of Councilor District 10 at the Marquette Hotel, Cape Girardeau, Thursday night, November 12. The festivities will begin with a social hour at 6:00 p.m. and dinner at 7:00 p.m. The program will feature Dr. E. C. Bohrer, West Plains, President of the Missouri State Medical Association, and Dr. R. O. Muether, St. Louis. Dr. Bohrer will speak on "Yester-

day, Today and Tomorrow." "The Present Status of ACTH and Cortisone" will be discussed by Dr. Muether.

Mineral Area County Medical Society

Dr. Michael M. Karl, St. Louis, and Dr. C. Alan McAfee, St. Louis, presented the scientific program at the meeting of the Mineral Area County Medical Society on Thursday night, September 24. The meeting was held at State Hospital No. 4 in Farmington with the program under the auspices of the Missouri Academy of General Practice.

GEORGE L. WATKINS, JR., M.D., *Secretary*

Pemiscot County Medical Society

A meeting of the Pemiscot County Medical Society was held in the Educational Building of the Presbyterian Church, Caruthersville, on Thursday night, September 17. Members of the Dunklin County Medical Society and the newly formed Butler-Ripley-Wayne County Society were also invited to this meeting and a number of physicians from these counties were present out of the total of twenty-three in attendance.

The Pemiscot Society in cooperation with the Missouri Academy of General Practice and the Cardiovascular Section of St. Louis University Medical School presented a panel discussion on "Newer Drugs in the Treatment of Hypertension." The participants on the panel were Drs. David B. Flavan, James G. Janney, Jr. and Robert Potashnick, all of St. Louis.

C. F. CAIN, M.D., *Secretary*

Semo County Medical Society

A meeting of the Semo County Medical Society was held at the Delta Community Hospital in Sikeston, on Wednesday night, September 16, with the scientific program under the auspices of the Missouri Academy of General Practice.

Dr. Robert O'Brien, St. Louis, spoke on "Common Errors in the Treatment of Fractures"; Dr. Francis J. Burns, St. Louis, spoke on "The Diagnosis and Treatment of Common Rectal Diseases."

Twenty-two physicians were present at this meeting.

WM. C. CRITCHLOW, M.D., *Secretary*

THE COUNCIL

The Council met at Bennett Springs State Park on Sept. 26, 27, 1953, with Victor B. Buhler, M.D., Kansas City, Chairman, presiding. Those present were Drs. Buhler, Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; R. O. Muether, St. Louis; Otto W. Koch, Clayton; J. Loren Washburn, Versailles; C. G. Stauffacher, Sedalia; W. S. Sewell, Springfield; J. H. Summers, Lebanon; E. Claude Bohrer, West Plains; H. E. Petersen, St. Joseph; Carl F. Vohs, St. Louis; E. Royce Bohrer, Jefferson City; V. T. Williams, Kansas City; R. B. Wray, Nevada; Henry Allen, St. Louis; J. W. Thompson, St. Louis; A. S. Bristow, Princeton; J. R. Amos, Jefferson City; Mr. John Noble, Kennett; Messrs. John Buckner, Springfield; Lemoine Skinner, St. Louis; Raymond McIntyre, St. Louis; T. R. O'Brien, St. Louis.

Boy Scout Drive

Mr. O'Brien presented correspondence concerning a statewide Boy Scout Movement and a Statewide Campaign beginning October 20 and asking support. On motion of Dr. Petersen, the Council voted to approve the drive and instructed that a letter be sent to county society secretaries to this effect.

Annual Session Program

Mr. O'Brien announced that the Program Committee for the 1954 Annual Session was progressing with its work but that it was not far enough advanced for a report at this meeting of the Council.

Treasurer's Report

Dr. Vohs presented the financial statement and Treasurer's report, which was accepted.

Missouri Medicine

Dr. Williams presented copies of the October issue of MISSOURI MEDICINE which members had not received as yet and copies of other state journals for comparison. After discussion, on motion of Dr. Royce Bohrer, the Council approved the continuance of Dr. Williams as Editor and Dr. Muether to have charge of scientific material. On motion of Dr. Petersen, the Council voted that special issues of the journal, on state geographical basis, be promoted.

Doctor Draft Act

Dr. Allen stated that at the present time the Doctor Draft Act was probably a "dead issue" but that in about a year it will become active—that no one can foretell the exact future, a lot depending on the attitude of the government toward active or passive defense against atomic warfare. He said that 5,000 doc-

THE
BROWN SCHOOLS
For Exceptional Children

When it becomes necessary to prescribe Specialized Training for the exceptional child, may we be of service? The BROWN SCHOOLS' facilities include seven separate residence centers, suburban and ranch, for homogeneous grouping; complete recreational and academic programs; daily supervision by certified psychiatrists, psychologists, and Registered nurses. Our view book and full details sent on request.

BERT P. BROWN
President
PAUL L. WHITE, M.D., F.A.P.A.
Medical Director

ACCEPTED FOR ADVERTISING IN PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION

P. O. Box 4008-J
AUSTIN, TEXAS

tors will be needed between July 1954 and 1955 on the present basis. He said the attempt now is to lower the percentage of doctors to 3 per 1,000 men in the Armed Services.

Field Secretary Report

Mr. McIntyre gave a report on recent meetings and gave a schedule of meetings that would be held in the near future, county society meetings and combined meetings with the Academy of General Practice. He reported a meeting of the Committee on Rural Health on August 9, a talk before a group of Farm Bureau women at Camp Kaiser on August 12 and on the exhibit of the Association at the State Fair in Sedalia which began on August 21. On hospitals in the state, he reported that Bethany has formed a nonprofit hospital association and was proceeding on that plan rather than a county tax supported hospital; that Cameron is attempting to increase the size of its hospital; that Jefferson County is studying the need for a hospital; that Chillicothe is increasing the size of its hospital; that Clay County is attempting to have a new hospital other than a county hospital. He reported that up to the present time 40 physicians have located in towns of less than 15,000 population. The report was followed by discussion, including some problems of hyphenations which have been considered.

Legislation

Mr. O'Brien reported that S. B. 375, providing that all medical expense be exempt from state income tax and which passed, was vetoed by the Governor because of technicalities in the bill. Attention was called to a letter from the A.M.A. on the Bricker amendment which would limit the executive power in the making of treaties and pointing out that this could supercede the Congress and Constitution and was of interest to physicians because such could happen in regard to socialized medicine. Mr. O'Brien discussed the Jenkins-Keough bill, which deals with the exemption from federal income tax of payments for annuities and such investments of self-employed persons.

Veterans Administration

Mr. O'Brien reported on a meeting which he attended in Chicago on September 1 dealing with the action of the A.M.A. House of Delegates, June, 1953 on nonservice connected disabilities of veterans. He read the following:

"Your Committee (Reference Committee of House of A.M.A.) recommends with respect to the provision of medical care and hospitalization benefits for veterans in Veterans Administration and other federal hospitals that new legislation be enacted limiting such care to the following two categories:

"(a) Veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated, and

"(b) Within the limits of existing facilities to veterans with wartime service suffering from tuberculosis or psychiatric or neurological disorders of nonservice connected origin, who are unable to defray the expenses of necessary hospitalization.

"Your Committee recommends that the provision of medical care and hospitalization in Veterans Administration hospitals for the remaining groups of veterans with nonservice connected disabilities be discontinued and that the responsibility for the care of such veterans revert to the individual and the community, where it rightfully belongs.

"The Reference Committee report adopted by the House expressed complete accord with the present program of hospital and medical care for veterans with service connected disabilities, and also included this statement:

"It is the belief of your committee that the medical profession must concern itself, not with the numbers of 'chiselers' in Veterans Administration hospitals nor with the efficacy of the Veterans Administration in the administration of enabling legislation, but rather with the broad question of whether such legislation is sound, whether the federal government should continue to engage in a gigantic medical care program in competition with private medical institutions and whether the ever increasing cost of such a program is a proper burden to impose on the taxpayers of the country. A consideration of this problem must of course be predicated upon a concern for the health of the entire population and not just a particular segment."

He pointed out that there are now 20 million veterans and this is increasing at about 1 million per year and on this basis, in fifteen years there will be 35 million veterans, which represents more than a half of the employed persons in this country. He presented an action that was passed by the American Legion Convention recently in St. Louis, as follows:

"WHEREAS, The hierarchy of certain uninformed and ill advised medical organizations of the United States recently offered testimony before the Subcommittee on Hospitals of the Committee on Veterans Affairs of the House of Representatives, 83rd Congress, 1st Session as follows: 'We do not feel that a Veteran, per se, who has suffered no disability by reason of his service in the Armed Forces, who has come out well and whole, has any more demand on the Federal Government than any other citizen. He has discharged the normal obligation of a man to bear arms in the defense of his Country. He should do that as a part of his citizenship, and by virtue of it, unless his service has resulted in some disability, we do not feel that he has any call on the Federal Government. We think that if he is indigent, he is a community responsibility.' And

"WHEREAS, The same medical organizations have gone on record at their recent National Conventions that it is their belief that these organizations must concern themselves not with the efficacy of the Veterans Administration in the Administration of enabling legislation but rather with the broad question of whether such legislation is sound. Now, therefore be it

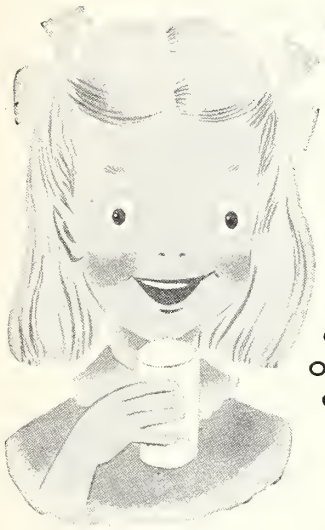
"*Resolved*, By the American Legion in National Convention assembled in St. Louis, Missouri, this 2nd day of September, 1953, that we hereby reiterate our position of many years that the man or woman who was called into the Armed Forces of this country by our Government, told where and when to go, what to wear and how, what to eat, when to go to bed and when to arise, what shots to take and who for risking his or her life, has been placed in a very special class by that Government, and

"*Be it further resolved*, That we know that historically, the citizens of the United States, through our Congress have always considered all veterans a special class of citizens and have always shown the respect and affection for these veterans by certain benefits and just compensations, and

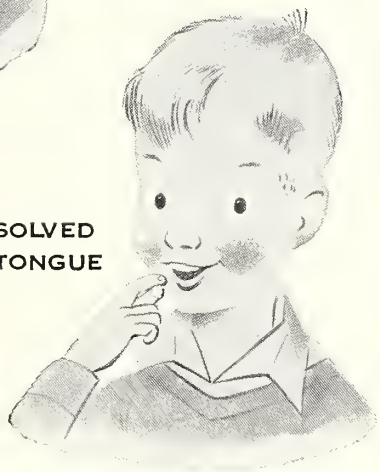
"*Be it further resolved*, That we reiterate and again support and endorse the basic principle of our Country that veterans who have fought for and defended all of our citizens are indeed a distinct class and the direct and specific responsibilty of our Federal Government

Children take it without the least bit of fuss...

SWALLOWED WHOLE



CHEWED—OR IN FOOD OR LIQUID



DISSOLVED ON TONGUE

- The Best Tasting Aspirin you Can Prescribe.
- The Flavar Remains Stable Down ta the Last Tablet in the Bottle.
- 24 Tablet Bottle... 2½ gr. each 15¢

2½ gr. ⇨ 1¼ gr.

Grooved Tablets—Easily Halved

NEW FLAVORED

CHILDREN'S SIZE

BAYER ASPIRIN

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N.Y.

when in need, or are sick, broke and have no place to go."

On motion of Dr. Dowell, the Chairman of the Council was empowered to appoint a committee to study veteran's care.

AMEF

Mr. O'Brien presented a request from the A.M.A. that the Illinois plan of assessing each member $20.00 for the American Medical Education Foundation be studied by other state associations. After discussion, the Council voted, on motion of Dr. Muether, to go on record as opposed to the Illinois plan and that MSMA continue to urge members to voluntarily contribute to the AMEF.

A.M.A. Membership

A request of the A.M.A. that a resolution introduced by the Minnesota Association be studied by other associations was presented. It dealt with compulsory membership in the A.M.A. and the method of collecting back dues. On motion of Dr. Washburn, this matter was tabled.

Report by Dr. Amos

Dr. Amos expressed his appreciation for the cooperation of physicians in regard to gamma globulin. He also explained that because of a cut in federal funds, that laboratory facilities at the State Board of Health had necessarily been curtailed.

Presentation to Dr. Thompson

Dr. Buhler presented a bound volume of THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION and MISSOURI MEDICINE, including the issue which gave the proceedings at which Dr. Thompson presided, to Dr. Thompson. At Dr. Thompson's request, all those present autographed the volume.

H. B. 82

Mr. O'Brien asked the opinion of the Council as to Blue Cross, Blue Shield and the Association going under the permissive legislation for nonprofit organizations to organize under certain conditions including a periodical report to the Secretary of State. On motion of Dr. Dowell, the Council voted to defer this until the next Council meeting to allow time for study.

Budget Committee

Dr. Buhler appointed the following Budget Committee: Drs. Vohs, Francka, Petersen, E. C. Bohrer and Buhler. On motion of Dr. Muether, this was approved.

Committee on Laboratory Medicine

Dr. Buhler announced the appointment by the President of the following members of the Committee on Laboratory Medicine: Omer Hagebusch, St. Louis, Chairman (2 years); Richard Riddell, St. Joseph (3 years); Henry C. Allen, St. Louis (3 years); Jack H. Hill, Kansas City (2 years); John A. Saxton, Jr., St. Louis (1 year).

℞: Common Sense

Liver and B_{12}

JESSE RISING, M.D.

With the advent of vitamin B_{12}, or cyanocobalamin as it is called in ultrascientific literature, the medical profession came into possession of a pure chemical of unique biological potency. We feel certain now that this vitamin is the "extrinsic factor" as well as the "anti-anemic factor" (AAF) or "erythrocyte maturing factor" (EMF). The remaining unknown element is the "intrinsic factor" deficient in patients with pernicious anemia, and somehow necessary for the absorption of vitamin B_{12} from the intestinal tract.

There are several B_{12} principles which are available as B_{12a} and B_{12b} but the physician need concern himself only with the B_{12} activity given in micrograms on the label of commercial packages. Liver preparations are also standardized according to their B_{12} potency rather than in units, the U.S.P. having discontinued the units in favor of the more accurate measurement of B_{12} content.

Liver preparations will probably be replaced by vitamin B_{12} in time because it has the advantage of purity, lower cost and absence of allergic reactions, and causes less pain at the site of injection. Its undisputed field of usefulness is Addisonian pernicious anemia. In the treatment of this disease it should be given intramuscularly because the patients lack the intrinsic factor which permits the absorption of the B_{12}. It is true that liver or B_{12} by mouth do have some effect, but they must be given in massive amounts (50 to 100 times the parenteral dose)—unpleasant and expensive.

So-called "crude liver" injections contain only 1 to 5 micrograms of B_{12} per cc. but they do contain other vitamins (including folic acid) in variable amounts. These products have had some vogue in nonspecific or empirical therapy, but they actually have little merit, and cannot be recommended for the treatment of true pernicious anemia.

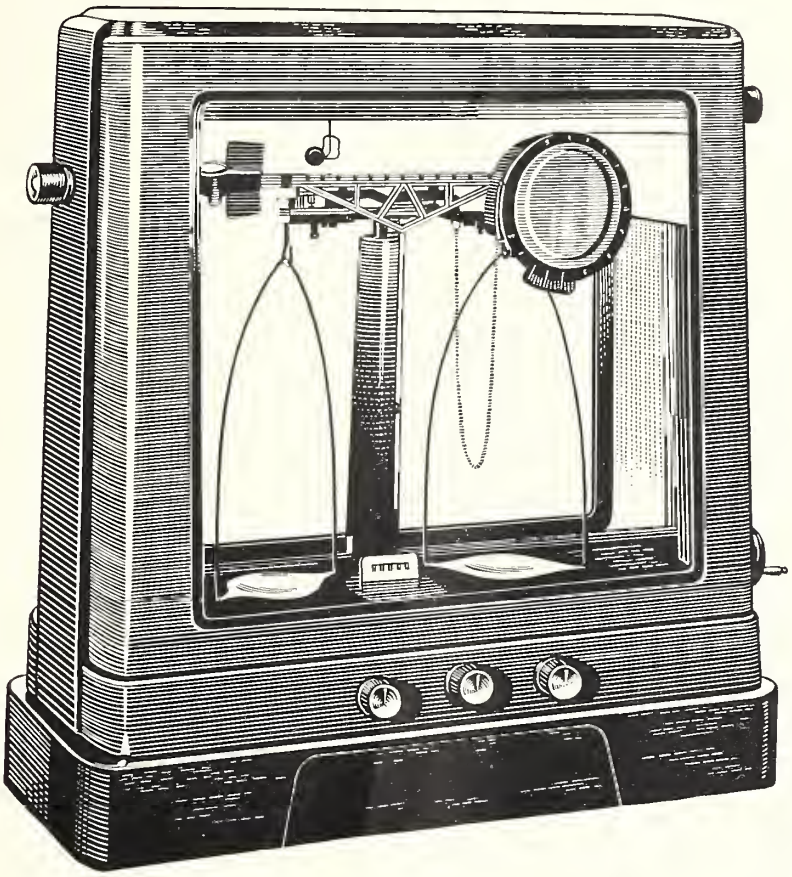
There is no evidence that combinations of liver or B_{12} with iron, folic acid or vitamins improve the response of patients with pernicious anemia, and they unnecessarily increase the cost of treatment.

Various neuropathies have been treated by large doses of vitamin B_{12} with encouraging results, but its use must still be considered experimental. There appears to be no reason why oral medication should not be used in treating patients who do not have pernicious anemia.

It should be noted that other macrocytic anemias (pregnancy, sprue) respond imperfectly to vitamin B_{12} or purified liver, but show prompt remission when treated with folic acid.

Available preparations of injectable vitamin B_{12} include: Berubigen (Squibb), Betalin 12 (Lilly), Bevidox (Abbott), Cobione (Merck), Crystamin (Armour), Cytobex (Parke, Davis), Normocytin (Lederle), Rubramin (Squibb) and Vitamin B_{12} (Premo, Armour, Wyeth) and others. These usually contain 30, 50 or 100 mcg. in each cubic centimeter; the more concentrated solutions being more economical. A 10

How the greater efficiency of Kent's Micronite Filter is verified



Until the new KENT cigarette was introduced last year, factual evidence of the comparative efficiency of filter-tip cigarettes did not exist.

Realizing this, the makers of KENT decided to compare the efficiency of its exclusive Micronite Filter with other filters—and to release the findings to the general public.

On delicate analytical balances, the *weight* of the nicotine and tars left in smoke after passing through the Micronite Filter was compared with the *weight* of the irritants left in the smoke after passing through conventional filters.

These scientific comparison tests show that while conventional filters remove some irritants, KENT's Micronite Filter *approaches 7 times the efficiency of other filters in the removal of nicotine and tars* and is virtually twice as effective as the next most efficient cigarette filter.

In addition, tests have been made on physiological reactions to cigarette smoke—and the findings have been released to the medical profession only.

These tests, without exception, show that KENT's Micronite Filter is the first to remove enough of the irritants from cigarette smoke to give susceptible smokers (about 1 out of every 3) the protection they need. At the same time, this filter lets through all the rich taste of fine tobaccos that gives smokers the satisfaction they want.

Already the new KENT has become so popular that it outsells brands on the market for years. If you have yet to try the new KENT, may we suggest you do so soon?

"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD COMPANY

cc. vial of 30 mcg. concentration sells at about $2.00 while one of 100 mcg. strength is about $3.00.

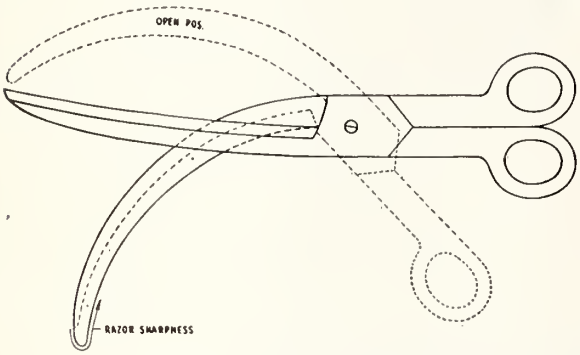
Oral vitamin B_{12} may be obtained as Berubigen capsules (Squibb), Bevidox capsules (Abbott), Normocytin tablets (Lederle), Redisol soluble tablets (Sharp and Dohme) and Rubramin capsules. Redisol is available in both 25 and 50 mcg. sizes; the others are mostly 25 mcg. On prescription the 25 mcg. tablets cost the patient about 10 cents each, and the 50 mcg. tablets retail at approximately 15 to 18 cents.

Low Forceps

A New Surgical Instrument

ROBERT LAMAR, M.D.

The modern obstetrician has fallen far behind his fellow physicians in introducing new and more complicated gadgets to supplement his maneuvers. This dearth of technical equipment is not entirely due to lack of ingenuity; some of the most ingenious alibis in the profession come from obstetric men. More to blame is the obvious limitation in the number of ways in which human gestation can be interfered with so as to allow full sway to the obstetrician's ability.



The LAMAR EPISIOTOMY SCISSORS

It is with this in mind that the above illustrated episiotomy scissors are being introduced. May we hastily add, however, that the profession as a whole—at least those on the cutting end—may well find some pertinent application. If generally accepted, the royalties might even allow the author to drop his obstetric practice.

The nomenclature of the various parts of this new instrument is essentially that of an ordinary pair of scissors, although the terminology can easily be made more complicated and confusing when teaching interns and students. It will be noted that the significant feature of these scissors is that they cut backward. In other words, they begin to cut at the end of the cut and end cutting at the beginning. This retrograde action is of distinct advantage in eliminating confusion as to the length of the episiotomy since the incision is ended at the start. This is also a wonderful point in the case of the surgeon who is much better off getting out than getting in. There are a number of such surgeons in our midst, and an instrument which allows them to cut themselves out seems a real boon.

Admittedly, to many operators this instrument would probably never provide an instance of specific usefulness. This very uselessness is another factor which, paradoxically, increases its value. For it is the one instrument which one can be absolutely certain will always be sterile and readily available on the operating tray.

BOOK REVIEWS

FREUD: Dictionary of Psychoanalysis, Edited by Nandor Fodor, Associate of the Association for the Advancement of Psychotherapy; and Frank Gaynor, Co-author of the "Dictionary of Industrial Psychology"; with a preface by Theodor Reik, Author of "Listening with the Third Ear." Philosophical Library, New York. 1950. Price $3.75.

The book covers the subject quite well. There are a large number of definitions for words, phrases, sentences and statements employed by psychoanalysts. The book admits that Freud has changed from time to time his descriptions of nervous and mental syndromes. We might consider that a certain number of statements by the psychoanalyst give only a hasty conception or questionable ones for many of their reports. Some might compare this with Shakespeare and Browning with the possibility of a great many interpretations of their writings and statements.

Four pages are devoted to "Keys to References." The author has used the word "Weltanschauung" which is one of those long German words covering a whole phrase. But they failed to translate the word, which probably means, "world intuition."

The book can be recommended as being up to date. Many of the words and sayings of the psychoanalysts are given correctly. The average library could well allot space along side of the reference dictionaries for this small book. A. L. S.

STANDARD NOMENCLATURE OF DISEASES AND OPERATIONS, by Richard J. Plunkett, M.D., and Adaline C. Hayden, R.R.L., 4th ed. Published for The American Medical Association by the Blakiston Co., Philadelphia, 1952. Price $8.00.

This is a logical clinical nomenclature. The new 4th edition was decided upon by the 5th National Conference on Medical Nomenclature under the auspices of the American Medical Association in Chicago, June, 1948. Later that year the Board of Trustees of the A.M.A. appointed a new editorial advisory board, who designated Dr. R. J. Plunkett as Editor, and Mrs. Adaline C. Hayden, R.R.L., Associate Editor for the new edition, as well as individual committees for each section. The committees' names include the well known physicians of the nation.

The "Standard Nomenclature" attempts to include every disease which is clinically recognizable and to

avoid repetition and overlapping. English terms in good usage are employed whenever possible in preference to Latin or Greek terms, although many exceptions occur. It is designed primarily for use by clinicians, as the clinical diagnosis is a most important source of information on prevalence and distribution of diseases.

The method of classification is based on two elements: the portion of the body concerned (topographic), and the cause of the disorder (etiologic). These two elements are designated by code numbers separated from each other by a hyphen. The first three digits describe the topographic site; the last three, following the hyphen, describe the etiologic agent. Combined, they form a complete diagnostic code number.

Detailed librarian instructions are given for setting up a code system by which clinicians and others may gain access to cases in order to complete accurate groups of cases for study, review and research.

A. J. B.

LIVING WITH CANCER, by Edna Kaehele, The True Story of a Woman Who Refused to Die. Published by Doubleday & Company, Inc. 1952. Price $2.00.

This book is written by a cancer patient who has outlived her expected survival period. Its thesis is that the fear of cancer, not cancer itself, is the greatest enemy. It is a touching story of one woman's battle with cancer, type not stated, and her battle to live a normal life. It cannot be recommended reading for every cancer patient but a few might benefit by reading it.

M. E. M.

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 2, 3, 4, 5, 1954

Palmer House, Chicago

DAILY HALF-HOUR LECTURES BY OUTSTANDING TEACHERS AND SPEAKERS on subjects of interest to both general practitioner and specialist.

PANELS ON TIMELY TOPICS.

MEDICAL COLOR TELECASTS.

TEACHING DEMONSTRATIONS.

SCIENTIFIC EXHIBITS worthy of real study and helpful and time-saving TECHNICAL EXHIBITS.

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D.,
Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY

FAIRMOUNT HOSPITAL

For Unmarried Girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

RADIUM & RADIUM D+E

(including Radium Applicators)

For All Medical Purposes

Est. 1919

Quincy X-Ray & Radium Laboratories
(Owned and Directed by a Physician-Radiologist)

HAROLD SWANBERG, B.S., M.D., Director
W. C. U. Bldg., Quincy, Illinois

COSMETIC *HAY FEVER?*

Prescribe UNSCENTED AR-EX Cosmetics

When perfumes or scented cosmetics cause allergic reactions — prescribe UNSCENTED AR-EX COSMETICS. Clinically tested to meet your high standards. Smart, fashion-right for patient acceptance. All needed beauty aids. Send for free Formulary

UNSCENTED

AR-EX COSMETICS, INC., 1036 W. VAN BUREN ST., CHICAGO 7, ILL.

AR-EX
HYPO-ALLERGENIC
Cosmetics

Clinically tested on allergic patients for use by allergic patients

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

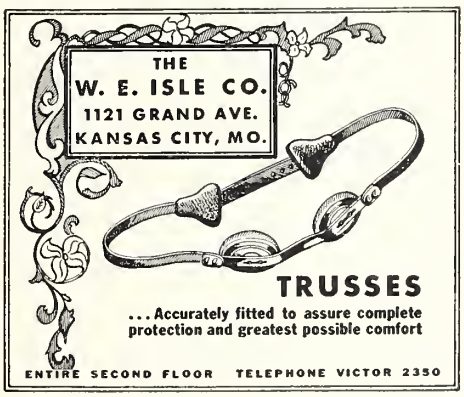
CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED: General Practitioner, to become permanently associated in long-established general practice, including part industrial work, with older GP not now having assistant, Kansas City, Mo. Terms and arrangements flexible. Write Box 190, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

IDEAL LOCATION FOR DOCTOR OR DENTIST. Nearest doctor is one and one-half miles away, location in heart of business section, yet adjacent to residential district. Suitable for combination home and office. 1214 North and South Road, University City, Mo. 5 rooms; tile kitchen and bath; garage; basement. Real Estate Management Co., 317 S. 11th Street, St. Louis, Mo. MAin-0952.

PHYSICIANS WANTED for Missouri State Hospital No. 3, Nevada, Missouri. Salary open according to experience and classification. Modern physicians' homes available. This is a friendly town with good schools and churches. Apply directly to Superintendent.



Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures *"know-how"*

ST. LOUIS Office
Erwin H. Wahl, Rep.,
3738 Washington Blvd.
Telephone Newstead 8363

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

O'CONNELL BROS. INC.
Ethical Pharmaceuticals
1929-31 O'Connell Ave. St. Louis 14, Mo.

INDEX TO ADVERTISERS

Abbott Laboratories 860-861
A. S. Aloe Company 833
American Meat Institute 825
Ames Company 820
Ar-Ex Cosmetics 892
Ayerst, McKenna & Harrison, Ltd. 865

Baker Laboratories 852
Bayer Company 885
The Brown School 883
Blue Cross-Blue Shield 875

Chicago Medical Society 891
Coca-Cola Company 821
Cook County Graduate School 878
Cordelia of Hollywood 879

Eaton Laboratories 868-869
Paul B. Elder Co. 879

Fairmount Hospital 892

Hamilton-Schmidt Surgical Company 892

W. E. Isle Co. 893

Katz Drug Company 889
Keeley Institute 890
Kent Cigarettes 887

Lederle Laboratories ..... Insert, 824-825
Eli Lilly and Company 834
Luzier's, Inc. 862

Mead Johnson & Company 896
Medical Protective Company 893
Merck & Company 831
Milwaukee Sanitarium 867

Neurological Hospital 892
Norbury Sanatorium Co. 892
North Shore Health Resort 874

O'Connell Bros., Inc. 893

Parke, Davis & Company 818-819
Chas. Pfizer & Company, Inc. 823
Physicians Casualty Association 890

Quincy X-Ray Laboratory 892

Ralph Sanitarium 881

G. D. Searle & Co. 851

U. S. Brewers Foundation, Inc. 859
University of Kansas Medical Center 894
Upjohn Company 895

West Texas Maternity Hospital 892
Whittaker Laboratories, Inc. 891
Winthrop-Stearns, Inc. 827
Wyeth, Inc. 829

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

Ninth Annual

Postgraduate Course

in

SURGERY

Four Days, January 18 to 21, 1954

Guest Instructors:

J. Garrott Allen, M.D., University of Chicago.
Henry K. Beecher, M.D., Harvard University.
Brian Blades, M.D., George Washington University.
Eugene M. Bricker, M.D., Washington University.
H. William Clatworthy, Jr., M.D., Ohio State University.
Frederick A. Coller, M.D., University of Michigan.
Edward L. Compere, M.D., Northwestern University.
Herbert Conway, M.D., Cornell University.
Oliver Cope, M.D., Harvard University.
Clarence Dennis, M.D., State University of New York.
Jack M. Farris, M.D., University of California.
R. Kennedy Gilchrist, M.D., University of Illinois.
Frank Glenn, M.D., Cornell University.
David V. Habif, M.D., Columbia University.
Daniel R. Higbee, M.D., University of Colorado.
William D. Holden, M.D., Western Reserve University.
Donald D. Matson, M.D., Harvard University.
Herbert Willy Meyer, M.D., New York University.
William H. Muller, Jr., M.D., University of California.
Edgar J. Poth, M.D., University of Texas.
Louis M. Rousselot, M.D., New York University.
Samuel J. Stabins, M.D., University of Rochester.
David State, M.D., University of Southern California.
Jerome A. Urban, M.D., Cornell University.
Claude E. Welch, M.D., Harvard University.
And Members of the University of Kansas Faculty.

For program announcement and information, write:

Extension Program in Medicine
UNIVERSITY OF KANSAS SCHOOL OF MEDICINE
Kansas City 12, Kansas

Curiosa et Trivia

William B. McCunniff, M.D.

For a catastrophe of non-atomic etiology, consider the 12,000 persons killed when a large glacial lake flooded over Huaraz, Peru, in 1941.

The human eye is capable of distinguishing 2,000,000 tints of shades and color.

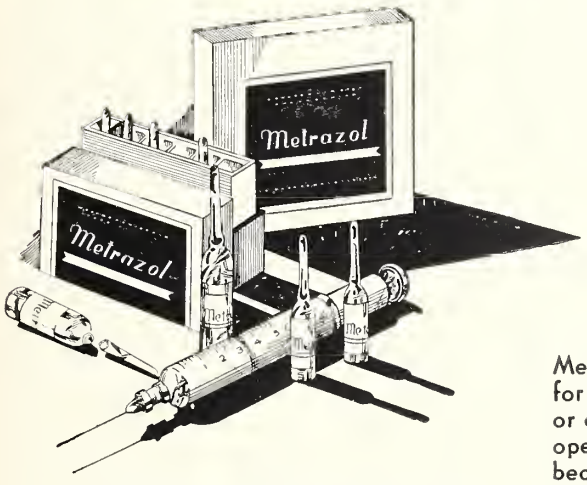
Marcus Terentius Varro, a prolific Roman author born in 116 B.C., wrote in one of his 620 books that swamp lands breed mosquitoes. Science confirmed his belief several centuries later.

Manufacturers of Swiss cheese have encountered difficulty because the common antibiotics used to treat cows for mastitis make it nearly impossible to produce the holes in their product. More recently, Neomycin appears to have controlled the mastitis without preventing the formation of holes in the cheese.

Dr. Zabdiel Boylston, a Boston physician for whom a street was later named, gave the first inoculation for smallpox in America in defiance of lay and professional opposition. He vaccinated his own son.

The prevalence of previously unknown tuberculosis is much higher in the "stay-aways" than those who participate in mass chest x-ray surveys. A recent study indicates the incidence to be about ten times greater in the stragglers.

An AP report describes how M. C. Brookshite received orders from the Federal Compensation Division to report to a physician for examination and treatment of lacerations of the left eye—which he lost ten years ago when struck by a nail at an ordnance depot. The patient stopped at the doctor's office at the appointed time, left his glass eye on the desk for the physician to "examine at his leisure."



Metrazol, pentamethylentetrazol
Ampules, 1 cc. and 3 cc.
Sterile Solution, 30 cc. vials
Tablets and Powder

Metrazol

COUNCIL ACCEPTED

A DEPENDABLE, QUICK-ACTING CEREBRAL AND MEDULLARY STIMULANT

Metrazol is indicated for narcotic depression, for instance, in poisoning with barbiturates or opiates, in acute alcoholism and during the operation and postoperatively when respiration becomes inadequate because of medullary depression due to the anesthetic.

Inject 3 cc. Metrazol intravenously, repeat if necessary, and continue with 1 or 2 cc. intramuscularly as required.

Bilhuber-Knoll Corp. Orange, N. J.

Entered as second-class matter, February 18, 1925, at the post office at Fulton, Missouri, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Publication Office: 1201-05 Bluff Street, Fulton, Missouri. Editorial Office: 634 N. Grand Ave., St. Louis 3, Mo. Subscription Price: $3.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Guest Editorial

Our New Opportunity

Earl English

Dean, School of Journalism, University of Missouri

The School of Journalism of the University of Missouri is preparing to introduce next year a program in medical editing and writing. The curriculum is being worked out, in cooperation with the new four-year School of Medicine, to train students interested in scientific and technical writing of medical and pharmaceutical news and features.

Dean Earl English

At a recent meeting of the American Medical Writers' Association in Springfield, Illinois, such a proposed course was worked out with both the University of Missouri and the University of Illinois. These two schools have devised a program of study which is in keeping with the basic philosophy that approximately one fourth of a journalism student's four-year program should be devoted to professional journalism courses and three fourths to academic courses. This curriculum includes courses in chemistry, biological science, bacteriology and preventive medicine, and other scientific courses relating to medicine.

This course of study is rigorous and I believe is one of the most challenging programs to be offered in journalism education. A graduate who has completed this course of study will easily find unusually interesting and profitable work. The editors of the many medical and pharmaceutical publications readily attest to this.

The problem is how to inform young people with an interest in both science and writing of this training program.

Perhaps the members of the medical profession in Missouri may be in the best position to bring this to the attention of young people. I should like to suggest that Missouri doctors keep it in mind in talking with young people who have a general interest in science, medicine and writing. Satisfying opportunities await qualified young men and women who pursue this important new field of professional training.

Still No Solution

. . . the results in a high percentage of cases (fracture of the femoral neck) are still unsatisfactory because of the high incidence of aseptic necrosis and nonunion. When these complications are encountered, various reconstructive measures are now available. Such measures do not restore a normal hip joint, however, and are acceptable only because the frequent complications cannot presently be prevented. Therefore, in spite of the fact that treatment of this fracture has improved tremendously in the last quarter of a century, we can still not be satisfied that a totally satisfactory means of therapy has been obtained. Until the incidence of aseptic necrosis and nonunion of these fractures can be diminished or abolished, we must still classify the fracture of the neck of the femur as "The Unsolved Fracture."—Has a Solution for the 'Unsolved Fracture' Been Found," *J.A.M.A.*, H. R. McCarroll, M.D., St. Louis.

Two cases of the occurrence of dermatitis under Melmac (Orthopedic Composition) casts are reported . . . patch tests . . . were positive in each case . . . both patients recovered . . . the occurrence . . . of dermatitis . . . is not a contraindication to its use. The advantages offered outweigh the disadvantage of a possible reaction . . . suggest that patients be advised of the early signs of such reaction . . . and that the cast be opened for examination of the skin. —"Allergic Contact Dermatitis Caused by Melmac Orthopedic Composition," *J.A.M.A.*, Adolph H. Conrad, M.D., and Lee T. Ford, M.D., St. Louis.

Upjohn

less-antigenic penicillin:

Cer-O-Cillin

Trademark Reg. U. S. Pat. Off.

POTASSIUM

Available as:

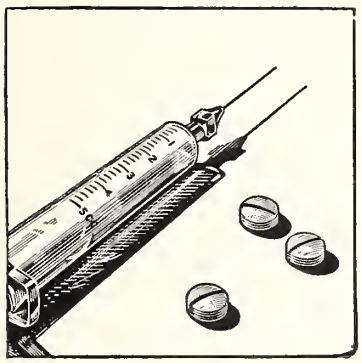
Sterile vials containing 200,000 and 500,000 units Crystalline Penicillin O Potassium.

Bottles of 12 buffered tablets, each containing 100,000 units Crystalline Penicillin O Potassium.

Depo*- Cer - O - Cillin Chloroprocaine for Aqueous Injection in vials containing 1,500,000 units Crystalline Chloroprocaine Penicillin O.

*TRADEMARK, REG. U. S. PAT. OFF.

The Upjohn Company, Kalamazoo, Michigan



With Our G. P.'s

William J. Shaw, M.D.

In the potpourri of medical meetings presented annually in Missouri none has been tailored more specifically for the general practitioner than the annual fall clinical conference sponsored by the Southwest Clinical Society of Kansas City. The finding of more than eighty outstate general practitioners listed as associate members of this society is evidence of the excellence of these meetings.

William J. Shaw, M.D.

At the 1953 annual session thirteen well chosen guest speakers discussed practical aspects of medicine in all fields at a level appreciated by general practitioners who treat medicine in all fields. The color telecasts of operative clinics and clinical demonstrations were superior to any shown in earlier years. The role of television in medical teaching was well demonstrated by the excellent choice of subject matter and well organized liaison with the audience. The unexpected and sometimes humorous reactions of the patients added to the enjoyment of some of the clinical demonstrations.

The innovation of placing a surgeon, an internist and a radiologist on the same luncheon panel with similar questions to answer was throughly enjoyed by the general practitioners who listened intently to the controversial discussion realizing that all three were partially right and none completely wrong.

A casual glance at one of the well attended scientific meetings revealed Doctors Clinton Miller, Lee's Summit; C. G. Stauffacher, A. J. Campbell, P. V. Siegel, Sedalia; Roy Pearse, Nevada; Wm. Allen, Glasgow; C. A. McBurney, Slater; Tom Dwyer, Mexico, and M. P. Leech, Fayette.

The general practitioners of Missouri are grateful to the Kansas City Southwest Clincial Society for the excellence of the 31st annual meeting and the thirty which preceded it. The 32nd session, under the presidency of Dr. C. E. Virden, will be looked forward to with anticipation and with a slightly skeptical wonder as to any manner in which this year's meeting could be improved.

Crossroads Comment

Peter V. Siegel, M.D.

Dear Uncle Ted:

Things 'round here have been busier than the proverbial cat on a tin roof with a bad case of what patients call the "intestional flu." In between times I started doing a little research on a problem that has been bothering me for a long time. After the first month operations were suspended to take stock whether to go on or not.

The subject of my investigation was Detail Men. Now I ain't really mad at 'em, there are some good ones, from the law of averages there just has to be. Believe you me there are some stinkers and like fee splitters in our union they shed a bad light on the whole profession. During the month of September there were fifty two of them in my office. Yep, that's what I said—52!! During my "be kind to detail men month" I found out that a guy just can't be polite to one in less than ten minutes so that is 8⅔ hours per month.

Detail men fall into types. There is the old boy who has been on the territory for months but before passed up Smithton like the Colorado Eagle. He starts out by saying very apologetic like that he always thought I was a D. O. and his company would never, never, never sell to one of them because his company is ethical. He cases the drug room, licks his chops and starts droolin' when he thinks of that commission. Then he winds out on his sales talk, pardon me—detail —like a carnival barker. Why his penicillin acts quicker, lasts longer, kills more bugs specifically, guaranteed not to rip, wear, tear or run down at the heels and furthermore I can save 2.396 cents per cc if I buy 1000 vials and get 250 free. That's ethical detailing.

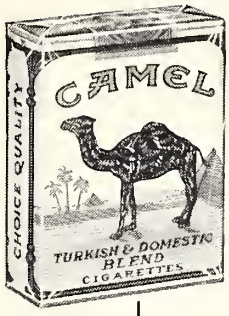
Then there is the boy who calls on the country folks first while he is wearing off his bad night before. He whips out an old beat up JAMA from 1947 and quotes Dr. A who reported a case of speckled eyeballs in left handed red headed identical twins that was cured by his product. What he doesn't know—or thinks I don't is that the whole report has been retracted by Dr. A.

There are those who bring the sales manager to see why I ain't reordered; those who come early and stay late all the while cryin' big tears; those who make passes at the office help which I suppose only proves they are humans.

The detail men I like? Yep—lots of them. They come in, show you the new products, remind you of a couple old ones, ask you if you need anything, and then leave because they know you have patients waiting who just might require one of their products.

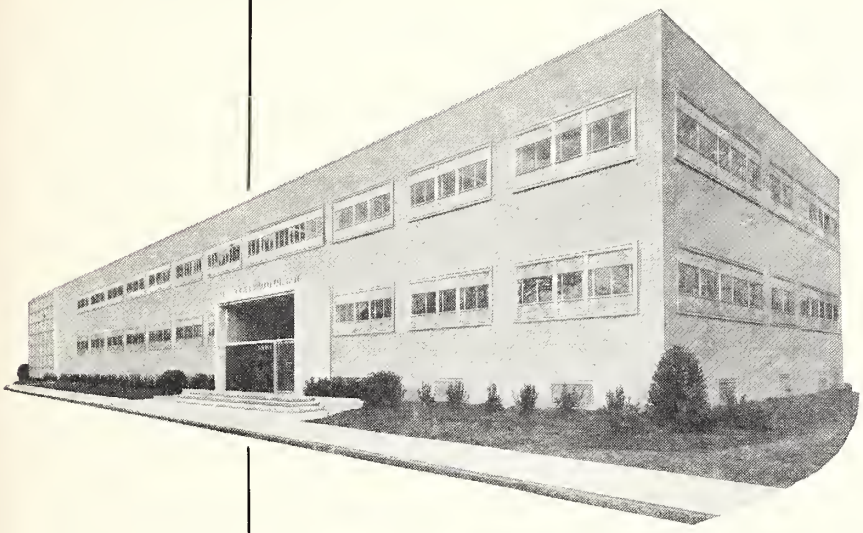
Your country nephew,
Pete

FORTY YEARS OF



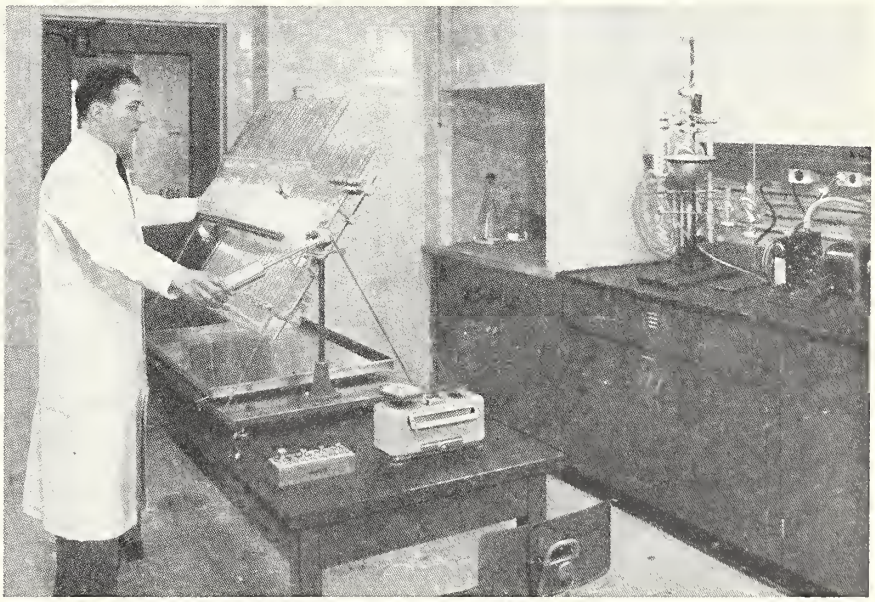
RESEARCH-PROGRESS

Camels' makers "never rest until the *good* is *better*. . . and the better, *best!*" For 40 years, our research has been constant, thorough, steadily progressive to make a good cigarette *better*. . . to make it *best*.



$2,000,000 addition

to Camels' facilities — this new research building of ultra-modern laboratories.



Every laboratory equipped

with the most modern research apparatus known today. (Right — "counter current" device that speeds analytical ingredient definition.)

R. J. REYNOLDS TOBACCO COMPANY · WINSTON-SALEM · N. C.

What Is Your Hobby, Doctor?

"The Sappington Home"

Located in 240 acre Prairie Park Farm, is the "Sappington Home." Originally this house was built in 1840 by William B. Sappington, son of Dr. John Sappington, the physician who first popularized quinine west of the Mississippi. Its reconstruction is now the chief hobby of colleague, John Lawrence, M.D., of Marshall.

This handsome mansion was built of hand-made

brick; these were made on the premises, much of the labor was done by slaves. Plans for the house came from England, and are a mixture of the classic Greek Revival and Georgian. In his reconstruction work, Dr. Lawrence utilizes parts from other old houses as they are torn down. Many of these date back to the old Santa Fe Trail days. Such items as walnut doors and window frames, hand-hewn beams are from some of the oldest homes known around Arrow Rock.

The "keeping room," which formerly was the outside summer kitchen, is now joined on the rest of the house. It had been used as a smokehouse for the last half century. Until rehabilitated, it had no floor, no ceiling and one wall was almost completely gone. Now it is one of the Lawrences' favorite rooms. It has the huge old fireplace the slaves used to cook on, huge hand-hewn oak beams in the ceiling; the waxed floor is made of old brick laid in herringbone pattern. Anyone who sees it can hardly believe the floor and beams have not been there for better than one hundred years.

Restoration at this time is only about one third complete. Another of Dr. Lawrence's hobbies is his collection of old locks which come from all over the United States, England and Mexico. These are used, in keeping with the antique motif, throughout the restored portion of the house.

Antique furniture, principally Early American, gathered from all parts of the United States, constitutes another large part in the restoration of the mansion.

A large pond, stocked with bass and blue gill, provides ample opportunity for angling, together with swimming and boating facilities for the Lawrence family. In order to provide proper landscaping, gardening is another corollary in the Lawrences' restoration of the property. They have added many hardy trees, shrubs and perennials; these lend a part in the picturesqueness of the over-all antebellum scene.

Especially to physicians, the restoration of the Sappington Home strikes a poignant note as an unusual and practical hobby.

(We will appreciate ideas concerning other members with interesting and unusual hobbies. V. T. W.)

Capsule Clinics

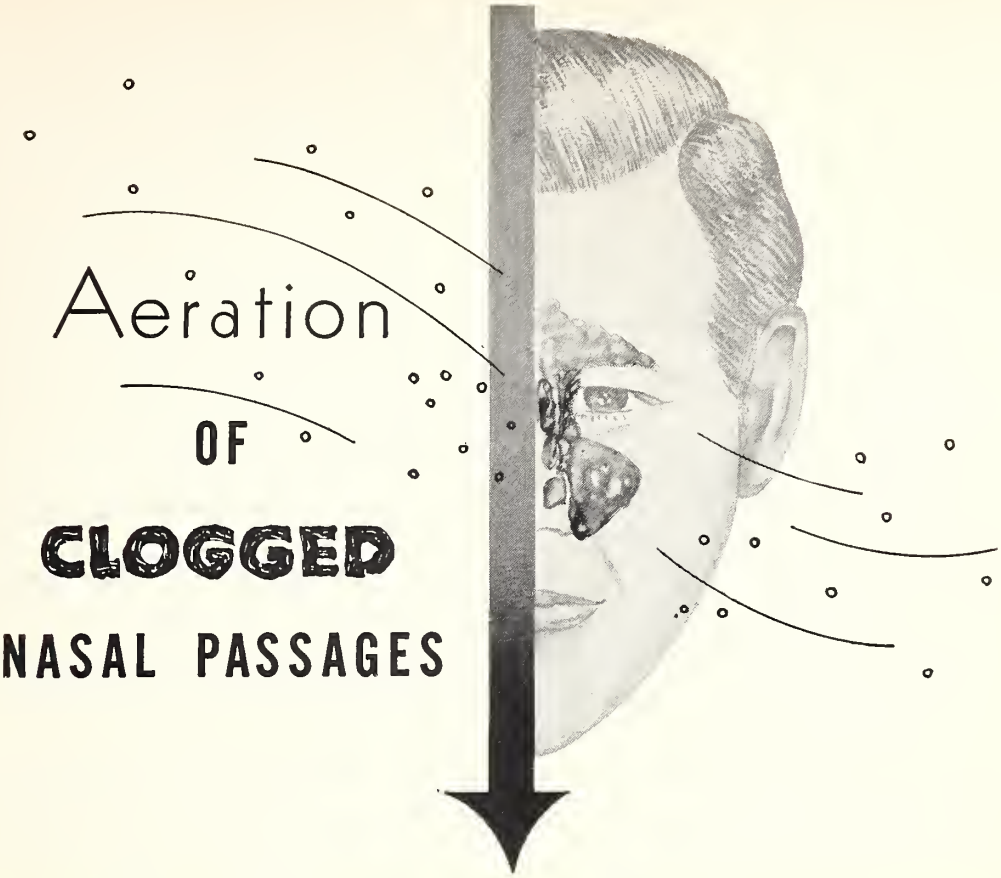
Irving A. Wien, M.D.

• The use of thiouracil drugs carries two potential disadvantages: the possibility of overdosage with further goitre enlargement, worsening of eye signs, and subclinical or obvious myxoedema, and the remoter risk of agranulocystosis or lesser toxic effects. Fraser, R., and Wilkinson, M.: Brit. Med. J., February 28, 1953.

• Premature separation of the placenta may be due to the following: toxemias of pregnancy in one third of the cases, anemia played an important role, they occurred more often at termination of each lunar month of gestation, and trauma, although usually emphasied in the minds of laymen, was not a prominent cause.

• The fundamental mechanism through which peptic ulcer pain is produced is abnormal motility, and for the production and perception of ulcer pain there must be: a stimulus, HC1 or others less well understood, altered gastro-duodenal motility, an intact motor nerve supply to the stomach and duodenum, and intact sensory pathway to the cerebral cortex. Ruffin, J. M., et al: Gastro-enterol. 23 (February) 1953.

• Vitamin K_1 in fat emulsion, given intravenously, proved to be an effective antagonist against the hypoprothrombinemia induced by Tromexan. Van Buskirk, W. C., et al: New England J. Med. **248** (January 8) 1953.



Breathing comfort as well as proper drainage and aeration of the sinuses during upper respiratory infections is assured by the swift and prolonged decongestive action of

NEO-SYNEPHRINE®

HYDROCHLORIDE

By shrinking the swollen mucosa, Neo-Synephrine permits drainage of purulent matter, restoring free breathing and relieving the headache caused by clogged passages.

RAPID AND PROLONGED ACTION

Clearing of nasal obstruction follows within seconds after application of Neo-Synephrine and is unusually prolonged, so that comparatively few daily applications are necessary throughout the course of a cold.

WELL TOLERATED

Neo-Synephrine is notable for its relative freedom from sting, virtual absence of compensatory congestion and also has been found relatively free from systemic side effects such as nervous excitation, cardiac reaction or insomnia even when tested on hypertensive, cardiac and hyperthyroid patients.[1]

NO APPRECIABLE INTERFERENCE WITH CILIARY ACTIVITY

Neo-Synephrine not only restores nasal patency, but is compatible with ciliary action.

NO DROWSINESS

Neo-Synephrine may be used by the ambulatory patient without danger of producing drowsiness or related sedative action. Applied topically, Neo-Synephrine confines its action to the upper respiratory passages.

SUPPLIED:

0.25% solution (plain), 1 oz., 4 oz. and 16 oz. bottles.

0.25% solution (aromatic), 1 oz. and 16 oz. bottles.

0.5% solution, 1 oz. bottles.

1% solution, 1 oz., 4 oz. and 16 oz. bottles.

0.5% water soluble jelly, ⅝ oz. tubes.

●

Neo-Synephrine, trademark reg. U.S. & Canada, brand of phenylephrine

●

1. Von Alyea, O. E., and Dannelly, Allen: *Arch. Otolaryng.*, 49:234, Feb., 1949.

WINTHROP-STEARNS INC. • New York 18, N. Y. • Windsor, Ont.

Our Auxiliary

Mrs. C. Alex (Helen) McBurney, *President*

Dr. Roscoe L. Pullen, dean of the University of Missouri School of Medicine, was the featured speaker at the fall meeting of the executive board of the Woman's Auxiliary to the Missouri State Medical Association in Jefferson City.

Dr. Pullen stressed the social and economic changes of recent decades which have influenced the health needs of this country and how the medical school hopes to prepare the physician of tomorrow to meet these needs.

The speech followed a luncheon at which 52 board members were present. Mrs. H. V. Guehleman, Jr., president of the Cole County Auxiliary, gave the Invocation. The Honorable Lieutenant-Governor, James T. Blair, Jr., welcomed the group before the luncheon. Mr. Blair remarked that the legislators are men who are trying to do a job as best they know how. They would appreciate being told what it is that we, the medical profession, want them to do for us, before a step is taken on a subject not favored by the medical profession. In his comments, Mr. Blair stated he was opposed to socialized medicine and complimented the work of the medical profession and the Woman's Auxiliary. He continued to urge us to write our legislators more frequently. Through Mr. Elair, Governor Phil Donnelly will proclaim March 30 as "Doctors Day."

In charge of arrangements for the day was the chairman, Mrs. James G. Bruce, with the other hostesses, Mrs. A. P. Stephan, Mrs. E. P. North and Mrs. Guehleman.

At 10:00 a.m. there were four round-table discussions led by the following: County Presidents: Mrs. W. E. Martin, Odessa. Program: Mrs. Martyn Schattyn, St. Louis County. Organization: Mrs. Norton J. Eversoll, St. Louis. Nurse Recruitment: Mrs. Elvin D. Imes, Maryville. Civil Defense: Mrs. Delon A. Williams, Kansas City.

The business meeting convened at 10:30 a.m. Mrs. U. J. Busiek, Springfield, gave the Invocation and Mrs. Logan Mayfield, Washington, led in giving the "Pledge of Loyalty."

Others Say

Hats Off to the A.A.A.

. . . It looks as though the conditions have to go on and on until our social consciousness suggests solutions. People buy cars and join the ranks of drivers—with little or no training.

The Missouri Automobile Association has . . . done things that point the way . . . We of the medical profession should appreciate what our Auto Club is doing. If we could save as many lives . . . by some new treatment we would be elated. They have gone in and voluntarily, and at considerable expense, have done things to save lives and suffering—just as we have done say, with respect to vaccination, hygiene and sanitation.—F. T. H'Doubler, M.D., *Greene County Medical Society Bulletin.*

No, Thank You

. . . the Red Cross will discontinue their blood collections . . . due to the need of the Korean war. I believe that most people in the Community supported this program, wholeheartedly, and rightly so.

Some of us, however, felt that this blood should not be used in the Veterans Hospitals for the treatment of non-service-connected cases. Most . . . believe that any service-connected disability should be treated in Government hospitals, but they also feel that non-service-connected disabilities have no more right to such treatment than I, as a combat Veteran, have a right to ask Uncle Sam to pay for my grocery bill. We are asked . . . if we desire to join with Kansas City to make a blood center there . . . I believe the answer should be no.

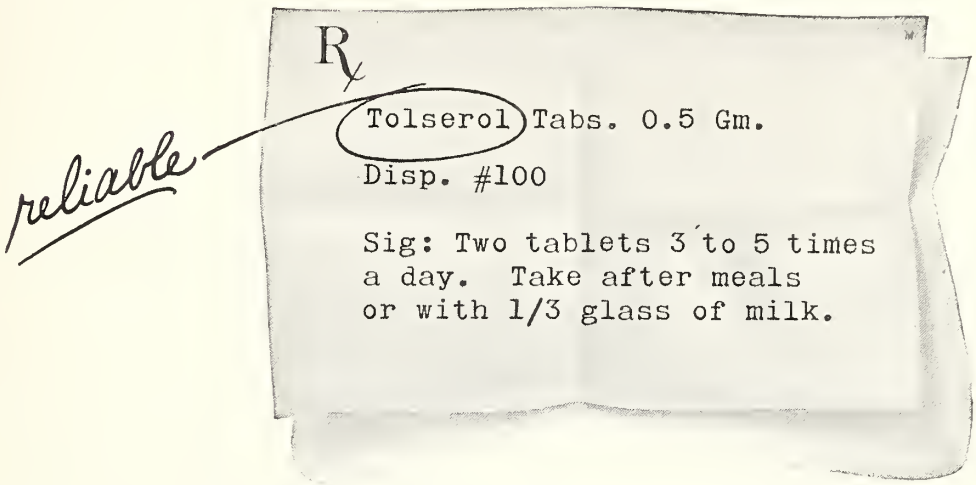
. . . however, I think this is a good opportunity for the Medical Society to lead the way in urging the hospitals to revamp their present set-up, so that a good blood registry can be established in the City and County.

. . . Let's do something about it now. In case Kansas City was bombed, a large blood registry here might save many lives. Let's not put all our eggs in the Kansas City basket.—F. Gregg Thompson, Jr., M.D., *Buchanan County Medical Society Bulletin.*

Nobody to Blame but Ourselves

. . . It is my personal belief that if all of the members of our profession had fulfilled the promises which we made the day we received our sheepskins, we would never have had to fight this battle of socialized medicine. It is the same old story of the very few bringing discredit upon the many. The many, many fine, conscientious, honest, humble men and women who are the backbone of the profession and its relation to the public suffer from these acts.—G. Wilse Robinson, Jr., M.D., *Jackson County Medical Society Bulletin.*

RAPID ABSORPTION—*MAXIMUM THERAPEUTIC EFFECT*



The clinical effectiveness of different brands of mephenesin tablets depends on their rate of absorption. A mephenesin tablet that disintegrates slowly is absorbed slowly. The resulting low blood levels may never produce a maximum therapeutic effect. Results with such a tablet are usually poor.

Tolserol Tablets are a result of extensive study and are formulated to disintegrate rapidly for fast absorption, thus maintaining optimum blood levels.

Tolserol

(*Squibb Mephenesin*)

Complete information on the use of Tolserol in muscle spasm of rheumatic disorders, in neurologic disorders and in acute alcoholism is available from the Professional Service Department, Squibb, 745 Fifth Avenue, New York 22, N. Y.

SQUIBB

Missouri Medicine in Review

Leo H. Pollock, M.D.

DECEMBER 1913

St. Joseph recently adopted an ordinance creating a sanitary district where it is now unlawful for any person to maintain a privy-vault or cesspool. . . . J.A.M.A. Editorial: ". . . Experience has shown that a complete cure of syphilis cannot be secured uniformly by one or two injections of Salvarsal or Neosalvarsan." . . . The government is exploiting . . . the radioactivity of the waters of Hot Springs, Arkansas. While the Interior Department appears to be in possession of the information, this has not been made public. . . . On December 19 and 20, the Western Surgical Association is to meet at the Planters Hotel, St. Louis. Attendance of seventy-five men is expected.

DECEMBER 1928

Buchanan County Medical Society meeting heard a paper by Dr. Caryl A. Potter, St. Joseph. In his discussion of "Duodenal and Fecal Fistulae" he described his findings that wet dressings of beef broth with a solution of one-tenth normal HC1 prevented digestion of the tissues by the escaping duodenal juices. . . . It has been brought to the attention of the Buchanan County Society that several insurance companies doing business under the Workmen's Compensation Act are attempting to dictate to employers the physician or surgeon and type of medical service rendered. The Society condemns this practice, will so notify industrial concerns in the area.

DECEMBER 1933

The City of Butler has purchased the Butler Memorial Hospital and will operate it through a board of trustees. . . . The St. Louis Medical Society presented Fifty Year Service Certificates to Doctors Adelheid C. Bedal, Arthur H. Bradley, W. Antoine Hall, W. Jackson Miller, Joseph J. Meredith, Ferdinand O. Sturhahn, Joseph M. Trigg, Henry R. Barton, Harry S. Crossen, Clarence M. Nicholson, Vilray P. Blair, Frederick P. Parker and Orril L. Suggett. . . . It would be interesting to know how many physicians in Missouri have written their Congressmen expressing opposition to the medical and hospitalization provisions of Senate Bill 1161, the Wagner-Murray-Dingell bill. It might be revealing to know if the patients of physicians have written any similar letters. . . . Dr. Philip A. Shaffer, Dean of Washington University School of Medicine, was elected vice president of the Association of American Medical Colleges at their meeting in Cleveland. . . . Drs. W. M. Wheeler and Edward Schaeffer, Sedalia, were guests of honor at a dinner given by the Pettis County Medical Society in observance of their fiftieth anniversary in the practice of medicine.

Progress Notes of Prepayment Plans

(Kansas City Blue Cross)

Kansas City Blue Cross and Blue Shield membership has been notified of a rate and benefit increase effective February 1, 1954, for all members except those enrolled on the nongroup contract.

Under this new program, the private room allowance provided by the maximum Blue Cross agreement will be increased from $7.00 a day to $10.00. The drug benefit will be increased to include not only those drugs listed in the *U. S. Pharmacopoeia,* but also those listed in the *National Formulary* and *New and Non-Official Remedies.* In the Blue Shield benefits, diagnostic x-ray for accidents will be increased from $15 in any twelve month period to $15 each accident.

Even though the Kansas City rate and benefit schedule was increased two years ago, rising hospital costs make this further revision necessary. Hospital costs, in an upward spiral for quite some time, have risen sharply the past year due mainly to some revised personnel policies. Principal among these is the reduction of the hospital work week to forty hours—a change that has become effective in most hospitals of the Kansas City area within 1953. This shortened work week has added many new employees and is generally considered the greatest single factor in the 1953 hospital cost increase.

Blue Cross is a service program with most of the benefits paid in full regardless of the quantity used by the patient or the amount charged by the hospital. As the cost of these services goes up, Blue Cross protection becomes increasingly valuable to the member. But, in order to provide such a service, the dues rate paid by the member has to keep pace with hospital costs.

Changing more than 350,000 Blue Cross-Blue Shield members in the Kansas City area to this program will be a job that will require the understanding cooperation of the medical profession.

...“truly extraordinary” results in intractable bronchial asthma

Cortone®

ACETATE
(CORTISONE ACETATE, MERCK)

In a review article on hormonal therapy,[1] complete relief of symptoms was reported in 62 per cent of 116 asthma patients. Another 24 per cent were made “quite comfortable.” Duration of relief varied widely, with remissions occasionally lasting as long as several months. The author calls these results “truly extraordinary.”

[1]Evans, R. R., and Rackemann, F. M.: *A.M.A. Arch. Int. Med.* **90**:96–127, July 1952.

All* CORTONE *Tablets carry this trade-mark:

Before treatment. Observe typical facies and tense sternocleidomastoid.

After therapy with CORTONE. Note relaxation of accessory muscles of respiration.

CORTONE *is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

©Merck & Co., Inc.

President's Comments

An Associated Press report from Washington, dated October 31, stated that "Congressional and Treasury staff experts today were reported near agreement on a plan to give taxpayers bigger reductions for medical expenses."

"Under present laws, medical expenses are deductible on individual income tax returns only if they exceed 5 per cent of gross income. Thus a taxpayer making $6000 a year could deduct only those medical costs above $300.

"The probable approach will be to lower this 5 per cent figure to 3 per cent. Should this be done, a taxpayer making $6000 a year would be able to deduct medical costs running above $180.

"Rough estimates are that this would cost the government about $150,000,000 annually in revenue."

Apparently the Congress as well as the state legislature agrees with the Missouri Conference on Patient Care that the taxpayer deserves a break on state and federal income taxes when he is sick.

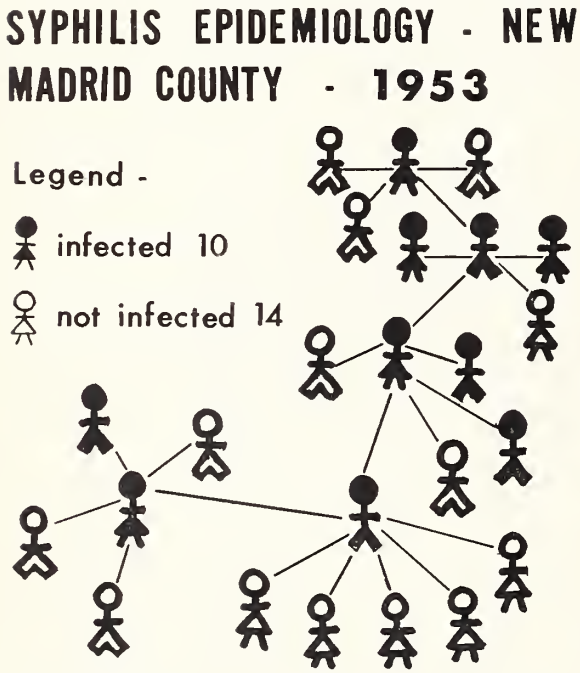
E. Claude Bohrer

Division of Health

James R. Amos, M.D.

Director Bureau of Communicable Diseases

In Missouri the venereal diseases continue to be a major problem even though the incidence has been steadily declining during the last six years. The reduction in the incidence of syphilis has been relatively greater than that of gonorrhea.



With the decline in the venereal diseases the number of public health venereal disease clinics has decreased each year because they cannot be economically operated in sparsely settled rural areas where the incidence of venereal disease is relatively low. It is evident, therefore, that most patients with a venereal disease are seen, diagnosed and treated by practicing physicians. For this reason the venereal diseases warrant the interest of all practicing physicians, because only through their alertness and awareness of the problem can venereal disease be ultimately eliminated.

The principal function of the Division of Health and local health departments in the V. D. control program is to find persons with unknown or unsuspected infection. This is done through contact tracing and related case finding activities.

Public Health Nurses and V. D. Investigators are trained in the technic of interviewing infected individuals for the names and locations of sex partners. These same professional workers will visit the contacts named and refer them to a physician of their choice for examination and treatment. All information relative to venereal disease cases, contacts, morbidity reports and medical records is, of course, kept in strict confidence.

Much progress has been made in areas of Missouri in which this cooperative approach to V. D. control has been carried out. The accompanying diagram depicts a recent experience in New Madrid County. The original case was diagnosed as primary syphilis in May 1953. Through patient interviews, field investigations and medical examinations, nine additional cases of infectious syphilis were found and treated—five of these being primary, two secondary and two early latent. In a period of five weeks ten cases of syphilis were rendered noninfectious by prompt location, diagnosis and treatment. The potential number of cases prevented by this action could easily run into the hundreds!

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1953, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Vol. 50 December, 1953 Number 12

THE DIFFERENTIAL DIAGNOSIS OF PERIPHERAL EDEMA

J. H. HILL, M.D.
KANSAS CITY

THIS IS A CONSIDERATION of edema of the skin and subcutaneous tissues, so-called "peripheral edema," insofar as it aids or confuses the physician in diagnosing diseases characterized by this sign. The factors which seem to govern the normal regulation of tissue fluid will be reviewed and the various diseases will be related to abnormality in one or several of these factors. The signs and symptoms of the diseases characterized by edema will be outlined together with pertinent laboratory data. Finally, a few illustrative cases will be shown.

Peripheral edema is not a particularly helpful sign in making a differential diagnosis since it occurs in a wide variety of diseases and may be due to several mechanisms. It may even be a source of confusion to some who may be misled into attributing the edema to heart disease when it is in reality due to some other much less serious disease. Laboratory examination of the edema fluid or of the edematous tissues is neither practical nor helpful and the differential diagnosis of the diseases characterized by edema depends largely upon accurate evaluation of the associated signs and symptoms together with a few rather simple laboratory tests.

Edema is an excessive accumulation in the tissue spaces of fluid which is usually more or less a protein free filtrate of the blood plasma. When there is damage to the capillary walls, as in burns or in inflammation, the edema fluid may contain varying quantities of protein.

The diagnosis of peripheral edema is made by observing the presence of a swelling of a part of the body usually associated with pallor. There is often pitting on pressure as in cases of congestive heart failure. In cases of long duration, pitting may be slight or altogether absent due to increase in fibrous tissue. Sometimes, as in acute glomerulonephritis, the skin may not pit easily and all of the skin may be involved in contrast to involvement of the dependent areas as in congestive heart failure. Edema may be recognized first in those areas in which the connective tissue of the skin is loose and resists but slightly the distention by edema fluid. Such areas are to be found in the skin of the eyelids and of the genitalia. However, since hydrostatic pressure is often an important mechanism in edema production, the first evidence of edema may be in the most dependent part of the body, the feet and ankles. It should be mentioned that an individual may accumulate as much as 10 per cent of his body weight in edema fluid before pitting and swelling of the skin becomes apparent.[1] This brings out the fact that the best indication of the onset of edema, or of its disappearance, is by measuring the body weight, a simple and inexpensive test indeed.

In health the regulation of the amount of tissue fluid depends upon a nice balance between its formation and its absorption. The main force that favors its formation is the blood pressure within the capillary vessels ranging from about 32 mm. of mercury in the arterial end to about 12 mm. in the venous end of the vessel. Since the main force favoring fluid absorption, the osmotic pressure of the plasma proteins, is the same throughout the capillary vessel, it is clear that conditions on the arterial side favor tissue fluid formation, and on the venous side its absorption. The lymphatic circulation drains off excess fluid insofar as it is able to do so, considering that it ultimately enters the great veins near the heart. Relatively slight effects are normally produced by the tissue pressure which opposes the formation of edema and the osmotic pressure of the tissue fluid proteins which tends to hinder absorption of the fluid.

In table 1 is a list of the factors which favor edema formation together with the various pathologic states in which they may operate; it is based in part on a classification of edema by Landis.[2] When edema occurs, one might term it "decompensation of the tissue fluid circulation." In some diseases only one factor may operate but at times several factors contribute to the formation of edema in a single disease.

Department of Pathology, Trinity Lutheran Hospital, Kansas City, Missouri.
Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

In considering which diseases are commonly characterized by edema it is of interest to learn the relative incidence reported by Cabot in his book on "Differential Diagnosis" first published in 1912.[3] He found that heart disease and renal disease accounted for the majority of instances of edema of the legs. It seems unlikely that a similar present day tabulation would reveal dissimilar results.

TABLE 1.

TABULATION OF THE FACTORS WHICH FAVOR EDEMA FORMATION TOGETHER WITH VARIOUS PATHOLOGIC STATES IN WHICH THEY MAY OPERATE

Increased capillary blood pressure
Congestive heart failure; thrombophlebitis; external pressure on veins as in tumors, ascites or pregnancy; vasodilitation as in overheating, hemiplegia or beriberi; dependency.
Decreased plasma protein concentration
Albumin is the important protein; loss of albumin in the urine as in nephrotic state or nephritis; loss into body as in ascites; loss from the surface as in burns; inadequate protein intake as in starvation, or impaired absorption due to diarrhea, vomiting or mucosal edema; impaired protein synthesis as in liver disease, nephritis, anemia, cachexia or chronic infection.
Increased capillary permeability
Inflammations; burns; allergic states such as angioneurotic edema, hives or serum sickness; acute glomerulonephritis; anoxemia as in anemia, congestive heart failure or chronic venous insufficiency.
Decreased lymph drainage
Congenital obstruction (Milroy's disease); lymphangiitis; destruction by cancer, surgery or filiariasis.
Hormonal disturbances
Myxedema; pregnancy; premenstrual state; antidiuretic hormone in hepatic cirrhosis; administration of ACTH, cortisone, desoxycorticosterone or testosterone.
Electrolyte retention
Excessive parenteral saline administration; congestive heart failure; administration of adrenocortical hormones.

I shall review briefly some of the prominent signs and symptoms of disease states which are characterized by edema.

Congestive Heart Failure.—Dyspnea on exertion, enlarged heart, ankles first involved, improved after sleep, dependent edema, responds to diuresis, to salt restriction and to mercurial diuretics.

Acute Glomerulonephritis.—Generalized edema, noticed first in the face, worse on awakening, proteinuria, hematuria, may develop cardiac failure and cardiac edema, hypertension or azotemia.

Nephrotic Syndrome.—Generalized edema, ascites and hydrothorax, lungs and liver free, hypoproteinemia with low albumin concentration, possibly abnormal plasma proteins, lipemia (elevated lipoproteins and blood cholesterol), found in patients with damaged glomeruli (Kimmelsteil-Wilson lesion in diabetes mellitus, second stage of glomerulonephritis, amyloidosis).

Hepatitis and Cirrhosis.—Clinical signs may be vague and indistinct, other diseases may obscure, hypoproteinemia with low albumin, do bromsulfalein excretion test and tests for abnormal globulins such as the cephalin cholesterol flocculation or thymol turbidity test, may have icterus, ascites or gastrointestinal hemorrhage, possible role of VDM (ferretin) or of the antidiuretic hormone.

Anemias.—Gradual onset of weakness and pallor, do complete blood count, reticulocyte count or bone marrow study may help in diagnosis, rule out pernicious anemia, may have severe anemia from slow blood loss as from hemorrhoids or gastrointestinal cancer, look for an associated cardiac failure.

Chronic Venous Insufficiency.—Pigmentation of the skin with ulcers or ulcer scars, dilated superficial veins and ecxematoid skin change, orthostatic edema, may occur in patients with old varicose veins, thrombophlebitis or A-V fistula.

Nutritional Disorders. — Starvation, cachexia, beriberi, look for an associated anemia and hypoproteinemia.

Several cases will be summarized in which edema was a feature of the clinical picture and which for one reason or another, are of interest here.

CASE REPORTS

Case 1. A 53 year old woman complained of weakness, leg edema and anorexia. She had slight icterus, a large nontender liver, icterus index 20; total serum protein 7.4 with albumin 2.6 gm. per cent; the blood cholesterol was 250 and the esters 113 mg. per cent; the alkaline phosphatase blood level was normal. Mercuhydrin gave no diuresis and the edema improved with bed rest. She was an alcoholic.

This was a rather typical example of alcoholic cirrhosis and hepatitis or both in which the edema was not benefited by the administration of mercurial diuretics since it was due to hypoproteinemia.

Case 2. An 81 year old man complained of a hernia, anorexia, edema of the legs and ascites. He had an enlarged liver and a slightly palpable spleen. Urine specific gravity varied between 1.010 and 1.017; the erythrocyte count was 4.2 million with 84 per cent hemoglobin. Total serum protein 7.6 with albumin 4.3 gm. per cent; icterus index 15; nonprotein nitrogen 29; cholesterol 116 and esters 100 mg. per cent; 4 plus cephalin cholesterol flocculation; 80 per cent bromsulfalein retention.

In this example of hepatic cirrhosis there was no history of alcoholism. During his hospital stay spider nevi appeared. He sought medical advice primarily because of difficulty in managing his hernia. The antidiuretic hormone may account for the edema in this case since the serum albumin concentration is apparently not decreased. It should be remembered however that alpha globulins are measured along with albumin in the usual hospital laboratory methods for measuring these proteins in the blood.

Case 3. A 56 year old man was admitted to the hospital because of acute pulmonary edema and leg edema. The nonprotein nitrogen was 315, creatinine 23; blood pressure 190/100; urine 1.013, 2 plus protein and innumerable red blood cells; the prostate gland was enlarged and the urinary bladder empty on admission; catheter drainage produced 11,000 ml. urine in twenty hours. Intravenous pyelograms showed no pathologic condition. With return of renal function there was a precipitous drop in the blood nonprotein

nitrogen to normal levels in forty-eight hours, the blood pressure also returning quickly to normal. A transurethral resection of the prostate gland revealed adenocarcinoma.

This case presents unusually severe acute azotemia, hypertension, peripheral and pulmonary edema with remarkable regression of symptoms and laboratory abnormalities upon return of kidney function. The cause of the acute renal failure was not apparent although related no doubt in some way to the prostatic pathology. How much of the picture was due to cardiac failure, sodium retention, or even perhaps hypoproteinemia, could not be surmised from the information available.

Case 4. A 44 year old woman had slight pedal edema for several years, worse with menses. She had had to be on her feet all day. Since last menses, two weeks previously, she had had 20 pounds weight gain with progressive dependent edema. Low salt diet, ammonium chloride and mercurial diuretics were not effective. Dyspnea and orthopnea had been present for two days. Blood pressure was 166/96. Urine examination was normal with specific gravity 1.009 to 1.024; 3.5 million red blood cells, 68 per cent Hb.; nonprotein nitrogen 21; glucose 77; cholesterol 107; total serum protein 4.8, albumin 3.4. She lost 20 pounds weight in eight days in the hospital and was discharged improved and without edema. The diagnosis was "edema, cause undetermined."

This was a most puzzling case as far as the diagnosis was concerned until the intern assigned to the case happened to pick up a copy of the *Lancet* in which some Dutch physicians were describing their experiences with licorice.[4] They had used rather large quantities of powdered licorice in treating patients with peptic ulcer during the war and had noticed that some of them developed edema with hypertension, headache and exertional dyspnea. Further study showed that ingestion of large quantities of licorice produced effects similar to those following injection of deoxycortone or of ACTH, i.e. retention of water, sodium and chloride, with a fall in the hemoglobin and serum protein concentrations, and with a rise in the venous pressure and systolic pressure from overburdening of the circulation by fluid. When licorice was administered to a patient with Addison's disease and to one with rheumatoid arthritis there was no beneficial effect noted. The intern was gratified to learn that this woman had eaten large amounts of licorice for years and especially in the few weeks preceding the onset of the edema. The marked clinical improvement corresponded with abstainance from licorice.

Hines[5] described an unusual accumulation of fat in the skin of the buttocks and of the lower extremities in women, the upper part of the body being normal. Besides fat legs there was edema of the fatty tissue which might become severe enough to alarm the patient. Aside from the emotional disturbances associated with fat swollen legs, there were no ill effects. This disease entity was termed "lipedema." Hines, in mentioning the fact that edema may in slight degree be within the normal range of body changes, measured the circumference of his own legs on ten consecutive days at 8:00 a.m. and at 5:00 p.m. with the discovery of an increase of between 0.5 and 1.2 cm. or a mean daily increase of 0.7 cm. The only apparent cause for this development of slight edema as the day wore on was the dependent position of the legs.

SUMMARY

Peripheral edema may be a sign of serious organic disease or it may be the sign of quasi normal states such as premenstrual edema, the edema of hot weather and of prolonged dependency.

The significance of peripheral edema in a single case depends upon an accurate evaluation of the associated signs and symptoms together with a few simple laboratory tests.

An example of edema probably due to excessive ingestion of licorice is presented.

Trinity Lutheran Hospital.

BIBLIOGRAPHY

1. MacBryde, C. M.: Signs and Symptoms, Their Clinical Interpretation, Philadelphia, J. B. Lippincott Co., 1947, p. 224.
2. Canatrow, A. and Trumper, M.: Clinical Biochemistry, Philadelphia, W. B. Saunders Co., 1945, ed. 3, p. 258.
3. Cabot, R. C.: Differential Diagnosis, Philadelphia, W. B. Saunders Co., 1920, Vol. 2, p. 467.
4. Molhuysen, J. A., et al.: Liquorice Extract With Deoxycortone-like Action, Lancet 2:381-386 (Sept. 23) 1950.
5. Hines, E. A., Jr.: Lipedema and "Physiologic" Edema, Proc. Staff Meet. Mayo Clin. 27:7-9, 1952.

Problems in Surgical Training

It appears that there is a definite need for the training facilities of non-university private hospitals . . . these training programs (should) embody the basic principles of the Halsted system . . . a part of the training period spent on a service where a major portion of responsibility can be delegated to the resident staff under the supervision of capable attending surgeons. To supply this need requires . . . maintenance of an adequate nucleus of service beds, and the effective organization of the staff for teaching.

University medical centers should . . . cooperate by every means possible to make these services of high quality.

It is the responsibility of the medical profession to see that the growth of health insurance . . . should provide for the admission of patients of selected economic levels with medical service insurance toward training services.

The use of private clinical material for surgical training should be developed as much as possible, but should not be considered as being adequate to supplant completely the experience to be gained from service beds.—Eugene M. Bricker, M.D., St. Louis, *Surgery,* September 1953.

Radioactive Gold for Maligant Effusions

. . . About half of the entire group (of 74 patients with malignant pleural and peritoneal effusions) received palliation as determined by the inhibition of fluid formation. In the group of patients who lived longer than one month, distinct palliation was achieved in about 75 per cent. Response to treatment was influenced by neither the site of the primary tumor nor the location of the effusion.—William B. Seaman, M.D., Alfred I. Sherman, M.D., and MacDonald Bonebrake, M.D., St. Louis, *J.A.M.A.,* October 17, 1953.

ABDOMINAL TRAUMA

GENE B. STARKLOFF, M.D.
DRENNAN BAILEY, M.D.
AND
RANDOLPH RUTLEDGE, M.D.
ST. LOUIS

MODERN CIVILIZATION has compensation and penalties. If rapid transport can be considered a compensation, abdominal trauma is its penalty. Crowded city streets, crimes of violence and industrial accidents have further resulted in an increased incidence of trauma to the abdomen and its contents.

There is a challenge to meet figures of increased incidence with methods for lowering mortality and it is timely to review experience in the management of abdominal trauma and to emphasize features that have resulted in improved handling of the problems encountered.

In the last ten years there have been 273 cases of abdominal injuries treated at the St. Louis City Hospital (table 1). In this series, 72 per cent were penetrating and 28 per cent were nonpenetrating. Two hundred three or 74 per cent of these patients were operated upon. In forty-seven patients in which operation revealed negative results, one patient died as a result of anesthesia. The mortality in the unoperated cases was 20 per cent while the mortality in the cases operated upon was 13.2 per cent, the overall mortality being 15 per cent.

DIAGNOSIS

When confronted with a patient who has been subjected to trauma, the diagnosis of the degree and extent of the trauma is of primary importance. The most immediate problem is an evaluation of the state of the peripheral circulation. Shock when present portends hemorrhage and the degree of shock usually reflects the amount of hemorrhage. The degree of shock has an important influence on the prognosis, as will be seen by table 2.

From the Surgical Service, St. Louis City Hospital and the Department of Surgery, St. Louis University School of Medicine.

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

By early recognition, adequate blood replacement and early operative control of bleeding, mortality rates can be further reduced. Bleeding is usually the result of either injury to a solid viscus, as the liver or spleen, or perforation of one of the larger vessels. Delay in operative control of bleeding is much more frequent in blunt trauma than in penetrating wounds. No great diagnositc acumen is required to determine the necessity of laparotomy in cases of penetrating wounds of the abdomen, especially when it is realized that it is not unusual for a projectile to ricochet and produce serious injury at a point far distant from its point of entry. In blunt trauma, diagnosis is more difficult and thus delays in definitive treatment are greater and are reflected in increased mortality rates.

Diagnostic factors of importance in addition to an evaluation of the state of shock include abdominal auscultation. Absent bowel tones usually imply either intraperitoneal hemorrhage or contamination. In 106 patients with absent bowel sounds, 91 per cent, when subjected to exploration, were found to have either intraperitoneal hemorrhage or contamination. That the presence of normal peristalsis should not lull one into a false degree of security is illustrated by 154 petients in this series with normal bowel sounds, 59 per cent of whom, when explored, had gross bleeding and contamination or both.

TABLE 2

RELATION OF SHOCK TO MORTALITY

Patients in Shock 156	Died 36
No Shock Present 117	Died 5

Shoulder Pain.—Patients complaining of shoulder pain may be assumed to have intraperitoneal soiling. Of twenty-three patients with shoulder pain, all were found to have rupture of the spleen, liver or intestines. Pain is not, however, a constant accompanying symptom of visceral damage but when present is an indication for operative intervention.

Tenderness.—Diffuse abdominal tenderness and muscle spasm may or may not be present. The longer the period that has elapsed since injury and

TABLE 1
CASES AS TO TYPE OF TRAUMA, SURGERY, DEATHS

Year	*Cases*	*Sharp*	*Blunt*	*Operated on*	*Not Operated on*	*Negative Ops.*	*Ops. Died*	*Unops. Died*	*Total Deaths*
1943	19	17	2	15	0	2	6	1	7
1944	25	22	3	14	0	3	1	0	1
1945	14	7	7	6	6	3	2	4	6
1946	20	19	1	14	2	2	4	1	5
1947	35	25	10	25	3	3	4	1	5
1948	24	13	11	19	3	1	3	2	5
1949	27	17	10	18	4	4	2	1	3
1950	34	23	11	28	2	9	3	2	5
1951	40	30	10	33	2	13	1	1	2
1952	35	23	12	31	4	7	1	1	2
Total	273	196	77	203	26	47	27	14	41

the greater the degree of contamination, the more likely are these signs to occur. We have recently seen two patients with gross fecal contamination due to rupture of the bowel who showed no spasm and only minimal abdominal tenderness during the three hour period elapsing from injury to exploration. Absence of tenderness and muscle guard are frequently seen in the older age groups with peritoneal contamination.

Bladder catheterization should be carried out promptly and the urine examined for blood. If blood is found, cystograms, cystoscopy and intravenous pyelography is indicated.

Rectal examination should always be done. Blood found on the examining finger may indicate injury to either the rectum or distal colon. Patients must be examined in the prone as well as the supine position. By such examination penetrating wounds of the buttock may be detected, suggesting bowel injury.

The Levine tube is an important diagnostic aid. The aspiration of blood signifies perforation of the stomach. We have recently become interested in the use of diagnostic abdominal tap to demonstrate the presence of intraperitoneal blood. Tap has been carried out in the left lower quadrant, the site elected being between the midline and iliac crest. An 18 gauge needle has been used. When blood has been returned on diagnostic tap, a ruptured viscus has been found in all cases.

X-ray.—X-ray examination is of great value in diagnosis. Demonstration of free air in the upright position makes exploration mandatory. Combined thoraco-abdominal injuries may also be diagnosed radiographically. Fractures of the ribs in the region overlying the spleen, kidney or liver may suggest laceration of these organs. When bladder injuries occurred due to blunt trauma, all in our series were associated with fractures of the pelvis. Fractures of the lumbar vertebra may be associated with laceration of the kidney. Table 3 shows the association of fractures of the ribs, pelvis and vertebra with injuries to the spleen, liver, bladder and kidneys.

TABLE 3

ASSOCIATION OF ORGAN INJURY AND FRACTURES IN BLUNT TRAUMA

Organ	*Liver*	*Spleen*	*Kidney*	*Bladder*
Number injuries	10	28	15	13
Fract. Ribs	7	9	5	0
Fract. Pelvis	0	0	1	13
Fract. Vert.	2	1	1	0
% Association	90%	35.7%	46.6%	100%

From an analysis of organs involved in this series, it can be seen (table 4) that in patients with blunt trauma, solid viscera are more frequently injured while in penetrating trauma the injured organs are in direct proportion to the space occupied by these organs. This has been pointed out in the past by Welsh and Gidding.[1]

Preoperative Care.—While many details of preoperative care merit attention, the *sine qua non* of therapy is the combating of shock while blood is the medium par excellence in the treatment of traumatic shock. Plasma, plasma expanders and saline containing vasoconstrictors are temporary substitutes while whole blood is being procured. In general the goal is stabilization of blood pressure levels at or above 100 milligrams of mercury systolic, but massive hemorrhage may merit immediate exploration for its control. Intra-arterial transfusions may be a life saving measure in cases that do not respond to replacement therapy via the intravenous route. Early surgical intervention is of utmost importance. A decrease in the time interval between admission and operation has resulted in the lowering of mortality in the cases we have reviewed. Morphine may be used to combat pain and apprehension, but its tendency to mask symptoms and depress respiration must be fully appreciated. Upper gastrointestinal tract decompression by means of the Levine tube is used routinely to decrease the possibility of aspiration during the induction of anesthesia.

TABLE 4

ABDOMINAL ORGANS INJURED BY TRAUMA

Type	*Lung*	*Diaphragm*	*Liver*	*Gallbladder*	*Pancreas*	*Spleen*
Penetrating	14	20	46	3	9	12
Blunt	3	1	10	0	2	28
	Stomach	*Intestine*	*Kidney*	*Bladder*	*Major Vessels*	
Penetrating	26	59	7	3	7	
Blunt	1	7	15	13	2	

The proper selection and competent administration of anesthesia has been a major factor in the reduction of mortality rates through the year. Endotracheal anesthesia is particularly desirable because of the frequent necessity of positive pressure in patients with associated thoracic injury. Gas-oxygen-ether and curare have been the anesthesic agents of choice. Spinal anesthesia is not desirable because of the frequent precarious state of the peripheral circulation and because so many patients are intoxicated, unruly and uncooperative. Skin preparation is carried out after the induction of anesthesia. If the injury has been penetrating, any protruding viscera are gently and thoroughly irrigated with saline and covered with sterile gauze. The conduct of operation varies with the exigencies of the situation but certain broad principles are worthy of emphasis. Incision must be placed to afford easy extension if required. This is particularly important in injuries of the left upper quadrant where thoracic extension may be desirable. In the case of penetrating wounds, if the wound of entrance or exit is large, is should be debrided and then extended for exploration. If small, it can be discarded and a right or left rectus incision used. When the abdomen has been entered, arrest of hemorrhage is the first responsibility of the surgeon. It is hardly neces-

sary to admonish against blind clamping. Digital pressure or temporary control of bleeding with packs will clear the field for accurate hemostasis. The necessity of locating and closing laceration of the diaphragm cannot be overemphasized. Diaphragmatic lacerations may result in the production of a sucking wound of the chest upon opening the abdomen. Failure to aspirate blood and air from the pleural cavity and subsequent closure of diaphragmatic lacerations may result in the later development of empyema.

Adequate and thorough abdominal exploration is necessary in traumatic wounds. This is particularly true of penetrating wounds in which projectiles may perforate numerous portions of the gastrointestinal tract. To miss one perforation usually means a fatal outcome. Particular attention should be given to the posterior aspect of stomach, duodenum and the retroperitoneal portions of the colon and the rectum. The danger of an associated hematoma of the bowel wall masking a perforation is a real one and should be guarded against. If injury to the bowel is extensive, resection and end to end anastomosis is the procedure of choice. Wounds of the colon may be treated by simple closure or closure with exteriorization depending on the type of injury. It is absolutely essential to perform proximal colostomy in all wounds of the rectum no matter how trivial. Colostomy may be carried out in the sigmoid or the transverse colon.

Liver.—Care of liver wounds requires fine judgment. Wounds of the liver were encountered in 25.1 per cent of the total cases of abdominal trauma in this series. Their management depends on their size. It has been pointed out by Hinton[2] that bleeding from a damaged liver has usually ceased by the time of operation. This is true in some penetrating wounds in our experience. However, in blunt trauma with large tangential tears of the liver, bleeding is frequently severe. While it has been stated by Allen[3] that drainage of liver wounds is not always necessary, we feel that exploration followed by drainage is the safest course and minimizes the ever present danger of bile peritonitis. Large lacerations with massive bleeding are best treated by packing. If this is resorted to, the pack should be loosened in the operating room on the fourth postoperative day and demoved completely by the tenth day. Freeing of the pack earlier than the fourth day may result in reprecipitation of bleeding and if packs are not removed by the tenth day, their removal may be most difficult. Small bleeding lacerations of the liver are best handled by mattress suture with absorbable suture material. We caution against the use of gelfoam except in unusual circumstanes because it acts as an ideal culture medium for pathogenic organisms which are frequently present.

Spleen.—Even the most trivial wounds of the spleen present the possibility of delayed rupture with severe hemorrhage. Suspected wounds of the spleen must be explored and, if the injury is confirmed, splenectomy should be carried out.

Gallbladder.—Injuries to this organ were infrequent in our series; only three patients suffering this mishap, all of them due to penetrating injury. If the rent is small, suture with subsequent drainage is indicated. If damage is extensive, cholecystectomy is indicated.

Pancreas.—Eleven patients sustained injury to the pancreas. Treatment is directed to the arrest of hemorrhage and the establishment of drainage of the pancreatic secretion. Fistula formation is common and appropriate measures must be taken to protect the skin from the digestive action of pancreatic enzymes. Fistulas can be expected to close spontaneously in most cases. Constant suction on the fistulous tract by means of a catheter and sump pump is frequently effective. One large persistent fistula in one of the cases (case of G.B.S.) was treated by implantation of the fistulous tract into proximal jejunum.

Genito-urinary Tract.—Injuries to the kidney are frequently best handled by conservative means. Normal intravenous pyelograms are of benefit in making a decision in favor of nonoperative treatment. Fractures or severe lacerations of the kidney may demand nephrectomy. We have been impressed with the infrequency in which exploration is indicated. Retrograde pyelograms may be indicated before decision is made to proceed with operation. Rupture of the bladder is treated by suprapubic cystotomy and repair of the laceration. Suprapubic cystotomy is also indicated in ruptures of the urethra in cases in which a catheter cannot be passed.

Injuries to Major Arteries.—Injuries to major vessels continue to be a major cause of mortality. The immediate temporary control of hemorrhage with concomitant massive blood replacement is the fundamental problem. In cases with injury to the vena cava below the renal veins, ligation may be resorted to. Frequently the massive hemorrhage and the large retroperitoneal hematoma make the use of packs the only logical procedure.

Sutures of major arteries can occasionally be carried out. Large defects in arteries such as the common iliac may be repaired with vein grafts or by the ingenious method devised by Bricker.[4] This consists of swinging up the distal end of the mobilized and transected superficial femoral artery and anastomosing it to the proximal end of the iliac artery. In this procedure the profunda femoris artery carries the arterial supply to the extremity.

The feasibility of this shunt in traumatic severance of the iliac has recently been applied by Lischer[5] with survival of the affected extremity. In the management of arterial injuries, heparinization is recommended. Lumbar sympathectomy is a valuable adjunct in aiding in the survival of the limb in arterial anastomosis or grafts.

Wound Closure.—The use of stainless steel wire has in our hands been the most satisfactory method of wound closure in the cases of abdominal trauma. Steel wire closure reduces the possibility of wound disruption and evisceration in patients who frequently have gross peritoneal soiling and rather prolonged periods of postoperative ileus. These are both factors which favor wound breakdown.

Postoperative Care.—Continuous gastrointestinal tract decompression by means of the intragastric tube and suction is important in the postoperative period. Suction is continued until normal peristaltic activity returns. Fluid and electrolyte balance must be carefully maintained. Blood volume determinations and restoration of deficits are necessary in the immediate postoperative period. Early ambulation is practiced in those individuals whose concomitant injuries do not preclude it. The judicious use of antibiotics is advocated. Penicillin is valuable in the prevention of pneumonia which frequently follows the massive blood loss of trauma.

When soiling of the peritoneal cavity has occurred, culture should be taken and the predominant organism determined. An evaluation of sensitivity should then be arrived at so that proper antibiotics can be used for control of infection. Vitamins, especially vitamin C, should be used because of its importance in normal wound healing.

MORTALITY

There has been a steady decline in operative mortality in reported series of cases through the years. In this series, the overall mortality rate of 15 per cent is comparable with other recently reported studies (tables 5 and 6). It is significant however, that in the years 1943 through 1947 the mortality rate was 18.5 per cent while in the last five years the mortality has been reduced to 6.2 per cent, a reduction in death rate of two thirds.

TABLE 5
MORTALITY

	Cases	*Deaths*	*Per Cent*
1943	19	7	36.8
1944	25	1	4.0
1945	14	6	42.8
1946	20	5	25.0
1947	35	5	14.2
1948	24	5	20.8
1949	27	3	11.1
1950	34	5	14.7
1951	40	2	5.0
1952	35	2	5.7
Total	273	4	15.0

We feel that this decrease is directly attributable to the following factors: (1) the availability of whole blood and its use early and in adequate amounts, (2) exploration of all cases in which a remote suspicion of intraabdominal trauma exists, (3) competently administered endotracheal anesthesia and (4) judicious employment of antibiotics.

Cases will still be encountered in which the severity of the trauma and the injury to major vessels are of such magnitude that death is inevitable but, by appreciation of the diagnostic and therapeutic factors outlined, further reduction of mortality can be expected.

TABLE 6

ANALYSIS OF OPERATION AND MORTALITY

1. 74 per cent of patients were explored
2. 16 per cent of patients exploration was not advised because of
   a) Trauma judged to be minimal
3. 9 per cent not operated for reasons as
   a) Died before therapy could be instituted
   b) Kidney trauma where conservative therapy was elected
4. 23 per cent of explorations were negative explorations Mortality in this group 2 per cent (1 death—spinal anesthesia)
5. Mortality operated case, 13 per cent
6. Mortality unoperated, 20 per cent
7. Mortality 1943-1947, 18.5 per cent
8. Mortality 1947-1953, 6.2 per cent
9. Total mortality, 15 per cent

SUMMARY

1. The experience of a large city hospital in dealing with abdominal trauma has been presented.

2. Two hundred and seventy-three cases of blunt and penetrating abdominal trauma have been analyzed. The overall mortality rate in these cases is 15 per cent.

3. Diagnostic and therapeutic procedures have been outlined.

4. Mortality figures have been discussed and significant factors responsible in lowering the mortality have been emphasized.

BIBLIOGRAPHY

1. Welsh, Claude E., and Giddings, W. P.: Abdominal Trauma, Am. J. Surg. **79**:252-258, 1950.
2. Hinton, J. William: Injuries to the Abdominal Viscera, Ann. Surg. **90**:351-356, 1929.
3. Allen, A. W.: Internal Injuries Without Penetrating Wounds, New England J. Med. **205**:1-34, 1931.
4. Bricker, E. M.: Personal Communication.
5. Lischer, C. E.: Personal Communication.

Management of Caustic Esophageal Burns

. . . The results of a study of experimentally produced lye burns of the esophagus . . . correlate with the pathologic findings in a series of human cases. . . . The findings unequivocally condemn early dilatation as dangerous and harmful to the reparative process . . . an analysis of a significant series of caustic strictures . . . treated by accepted surgical technics (showed) no deaths and no complications. . . . This study . . . justifies the recommendation that all established strictures of the esophagus be treated as soon as is feasible by excision and either end-to-end anastomosis or esophagogastric anastomosis.—Thomas H. Burford, M.D., Watts R. Webb, M.D., Lauren Ackerman, M.D., St. Louis, *Annals of Surgery*, September 1953.

THE IMPORTANCE OF ANESTHESIA TECHNICS IN THE POOR RISK PATIENT

CHARLES H. WHITE, M.D.
KANSAS CITY

ONE OF THE MORE fascinating aspects of the practice of anesthesiology is the multiplicity of problems. Every anesthesiologist is sooner or later confronted with a patient who is so ill that there is some anxiety as to whether he will survive the combined effect of operation and anesthetic. In certain cases the operation is essential to save the patient's life. The relationship between anesthesiologist and patient becomes intimate and vital, even "unto the valley of the shadow of death." The anesthesiologist approaches such a patient not by asking "what anesthetic should I give, but what can I do to safeguard my patient from sequelae peculiar to his illness?" The technic becomes not the simple act of technical administration of an anesthetic but a comprehensive view of the entire situation.

The anesthesiologist can profoundly reduce the morbidity and mortality in the poor risk patient by careful consideration of five equal categories: (1) preoperative diagnosis and physical status of the patient, (2) premedication, (3) choice of anesthetic agent and method, (4) supportive therapy and (5) postoperative care.

The modern technic demands that these be the considered responsibility of the anesthesiologist. A real need exists for better methods of evaluating the effectiveness of preoperative preparation of the poor risk surgical patient. Too often a patient who was considered adequately prepared shows signs of shock in the operating room or develops a serious postoperative complication. Too often do we hash over the irreversible states of the patient such as hypertension, congenital heart disease, arteriosclerosis and kidney disease when we should be more acutely aware of the reversible ones such as anemia, hypothyroidism and adrenal cortical insufficiency.

One notes with satisfaction the results of careful preoperative preparation of the present day hyperthyroid and the bronchiectatic patients, as examples of notable advancement. Clark has recently demonstrated that correction of blood volume deficits by blood transfusions is the most important factor in preoperative preparation of the malnourished, debilitated and underweight patient. A reduction in plasma volume masks anemia and protein deficiencies. Where the Evans blue dye method of calculating total blood volume is not available, a rule of thumb method can be used giving 40 cc. of blood per pound of reduction from normal in body weight in the present illness. Susceptibility to shock and postoperative morbidity is greatly reduced.

Time should always be taken preoperatively for careful cardiac evaluation. Today it is not uncommon to see patients undergo major surgical procedures even though they may be suffering from severe and even terminal cardiac disability. A better understanding of cardiac physiology has been taught by the cardiologists. For example, patients who have a severe and limiting mitral stenosis are apt to have a fixed and low cardiac output. These patients are also apt to have a marked pulmonary hypertension and when under stress are likely to collapse from either systemic circulatory failure or pulmonary edema. From the endocrinologists it has been learned that patients with marked adrenal cortical insufficiency may have hearts which are reduced in size and withstand stress poorly unless fortified by replacement hormone therapy. Experience has demonstrated that a patient with recent coronary occlusion need not necessarily be feared for as long as adequate oxygenation can be maintained along with sufficient blood pressure to maintain perfusion of the coronary vessels.

Only a few short years ago a patient who had auricular fibrillation would not ordinarily be considered a candidate for an elective operation. Today almost no one would reject such a patient for surgery. Auricular fibrillation is now quite adequately controlled preoperatively by proper digitalization. Knowing these fundamentals, estimating the cardiac reserve and correction of deficiencies in this reserve come within the realm of preoperative evaluation.

It is desirable that these patients going to operation be given premedication so as to allay fear, lessen reflex activity, control pain if present and diminish salivation and mucous secretion. At the same time it must be remembered that drugs used for premedication may markedly alter vascular dynamics, respiratory activity and metabolism. The least premedication that can be expected to attain the desired results should be the goal. In some it is deemed unwise to give any premedication. Opiates can safely be eliminated in many cases in which movement of the patient does not result in pain.

It is better to give insufficient premedication and to correct this by intravenous supplementation just prior to the administration of an anesthetic. To attempt to anesthetize a patient given too much premedication is both difficult and dangerous.

Ordinarily the selection of an anesthetic agent and technic is not a weighty decision. Considerable latitude can be exercised in this choice between many different agents and methods, no one of which can be said to offer any great advantage over the others. In the poor risk patient, however, certain choices offer a distinct advantage and may be a major factor contributing to the successful outcome of the surgical treatment.

Conversely, an unwise choice may result in increased morbidity or even a fatality. Usually the decision is that as long as satisfactory depth

Presented at the 95th Annual Session of the Missouri State Medical Association, Kansas City, April 26-29, 1953.

of anesthesia is obtained, and with a minimal aggravation of already disturbed physiology, it is wise to select the agent or technic with which one is most familiar. It is better if that familiarity extends to the skillful employment of a large number of agents and technics. It is better yet if the anesthesiologist has a knowledge of the technical problems involved in a particular operation and a full appreciation of the ability, experience and limitations of the surgeon. It is a fine thing to think independently but also wise to accede to pertinent information and suggestions offered by the surgeon and clinician. In these poor risk cases, in particular, it is best to capitalize on all qualified medical talents which aid in the selection of the agent.

Inasmuch as all anesthetic agents are lethal drugs in certain doses and to certain tissues, an agent that can be safely used on one patient may jeopardize the life of another. In recent years there has been a growing tendency toward combined or balanced anesthesia wherein small quantities of two or more agents are employed rather than large quantities of a single agent, thereby avoiding most toxic actions. This method is further enhanced by the use of curare type muscle relaxants such as d-tubocurarine (Squibb) metebine (Lilly), syncurine and the newer rapidly acting agent, anectine (Burroughs-Welcome). In fact the development of these curare-like preparations has been so fine that one can now have fingertip control over muscular relaxation regardless of the depth of anesthesia. In the handling of the anesthetic in the poor risk patient it is important to have minimal amounts of anesthetic agent with maximal relaxation and quick recovery. It is true, though, that all these refinements in the art are sometimes dangerous for the novice to attempt without due consideration. All these agents can depress respiration and a knowledge of endotracheal technic should precede their use. The fact remains that it should never be necessary to follow the old practice of "soaking" with ether or gas to obtain relaxation.

Thinking has so changed that it is now felt that the wide choice and flexibility of methods permits the taking of certain outside chances. Operative risk is no longer a fixed percentage. Once the agents have been selected it becomes a pitting of skill in dosage and timing of agents against the twofold challenge of producing adequate anesthesia and a waking patient at the end of the procedure.

There are certain poor operative risk patients who should have the benefit of good regional anesthesia. There are a number of these. One is in error in ever assuming that the intravenous or inhalation anesthesia is as safe as regional. One should not accede with ease to the patient's request for general anesthesia unless it is certain that loss of consciousness will not materially affect the conduct of anesthesia and surgery.

Hershey has shown that when stress, such as trauma of surgery or blood loss, is introduced in the present of general anesthesia of any depth, the vascular phenomena of vasomotion and capillary venous outflow exhibit decreased efficiency in direct proportion to the degree of stress and agent used.

In each individual there exists a balance between the sympathetic and the parasympathetic systems. In most patients one system tends to dominate over the other and thus the patient is said to be sympathotonic or parasympathotonic. The autonomic system of the conscious person is constantly adapting to or compensating for stresses placed upon it. The anesthetized person to some extent has lost this capacity and thus the burden of maintaining the environment is placed upon the anesthetist.

Never accept the loss of consciousness without some concern for, at best, it masks the basic picture of a poor risk. For instance, proper evaluation of a semi-comatose patient in a uremic or toxic jaundiced state may be difficult. We are all too prone to use pentothal or inhalation anesthesia at times to provide a minimal discomfort and blissful amnesia for the patient and, perhaps, to his detriment. In the elderly, cerebrovascular accidents may be undetected, mental processes fogged. The postoperative recovery may be complicated. I have in mind the mother of a physician friend of mine who was given intravenous anesthesia for excision of multiple corns. In her fogged postoperative mental state, she fell out of bed and fractured a hip.

An intercostal nerve block for abdominal surgery, a brachial block for arm surgery, a sciatic femoral block for leg surgery are examples of technics that could more frequently be used.

However, "never send a boy to do a man's job" in the use of agents. Insufficient anesthesia is not a substitute for the resistance the poor risk patient usually lacks.

At the other extreme, the giving of a "little ether because it is the safest" is not always wise. Although ether has been used for all types of patients and for all kinds of operations, it should be avoided as much as possible in these poor risk patients because of its slow unpleasant induction, irritating effects on respiratory passages and postoperative vomiting and hepatic dysfunction. In doses necessary for relaxation, ether paralyzes the normal physiologic protection against the development of shock. For the same last reason, large doses of barbiturates are contraindicated. All are familiar with the unnecessarily high mortality rate from the injudicious use of pentothal in the traumatized soldier early in World War II.

The tendency of many surgeons is to demand open drop ether as the anesthetic of choice when they have a seriously ill patient or one with severe cardiac disease. This thought originated and gained strength years ago when anesthesia was in its infancy or where modern technics and knowledge of high oxygenation was not appre-

ciated. The only time drop ether is indicated for these patients is when a competent anesthesiologist is not available. The practice of demanding open drop ether anesthesia because "the patient is too sick or too bad a risk" is to be condemned. It is the safest anesthetic only when the administrator is unfamiliar with other technics.

The choice and technic in dealing with a cardiac case has always been a problem. It is not enough to keep the patient alive on the table alone. Deleterious effects upon the patient may not be severe enough to become evident at once but may weaken the patient so that his downhill progress is accentuated. Anesthesia varies with the cardiac condition.

Hypertensive Heart Disease.—The diastolic elevation is of greatest significance for it is upon the diastolic pressure that the coronary arteries depend for their blood supply and a severe fall may create a cardiac anoxia. For minor operations either a local or field block should be used. Intravenous pentothal with 100 per cent oxygen may be safely given when the time element is short and the need for relaxation is minimal.

Single shot spinal anesthesia may be preferred where the level of anesthesia can be kept below the umbilicus but it is contraindicated for any intra-abdominal procedure that may be associated with a sharp blood pressure drop.

The use of fractional segmental spinal anesthesia removes the danger of massive spinal anesthesia and places spinal under more accurate control. In this method the subarachnoid puncture is performed as usual but with a special size Touey needle. A small plastic catheter is threaded through the needle and advanced within the subarachnoid space to a position two dermatomes below the optimal cephalad level of anesthesia. The needle is withdrawn and thereafter minimal doses of the agent may be injected at necessary intervals. The limited area of involvement negates the risk of uncontrollable hypotension.

Inhalation anesthesia using cyclopropane is often a method of choice. Combined with one of the curare relaxants, it offers any degree of relaxation and causes less systemic changes than other agents.

Patients with coronary disease should be properly reassured and fear and apprehension must be allayed by sedation prior to surgery. During administration the dangers are a fall in diastolic blood pressure, a low oxygen intake, an excitement stage imposing a great strain on the heart and overloading the circulation with fluids. Induction with pentothal is to be preferred followed usually by cyclopropane to which a small amount of ether has been added; just enough to stabilize the heart rhythm.

In cases of cardiac decompensation or those in whom decompensation is probable, spinal is the choice of anesthesia. It provides the added therapeutic function of reducing the load of returning blood flow to the right heart and relieves pulmonary congestion. When inhalation anesthesia is pushed to the point of good relaxation in these cases, cardiac failure with pulmonary edema is oftimes precipitated, either at once or within a day or two postoperatively. Needless to say, the cardiology of anesthesia requires proficiency in administering digitalis, quinidine, atropine, even unto the performance of cardiac massage in cases of arrest.

The anesthesiologist can approach the goal of preventing all operative and postoperative complications by planning in advance to cover the things which are most likely to happen to the poor risk patient. Shock should, if possible, be corrected before operative procedures are undertaken. With the advent of the modern blood bank plus the preoperative correction of circulatory deficiencies in hemaglobin and plasma, the anesthesiologist should be able to manage hemorrhagic shock. When the blood loss is great, multiple avenues of introduction are oftimes necessary, even giving blood intra-arterially when the critical level of blood pressure cannot be maintained. In general, blood should be replaced as it is lost if one is to prevent any alteration of circulatory blood volume leading to irreversible shock. I cannot see the rationale of the postoperative transfusion. Stanton has shown that red cell volume, when depleted by operation or postoperative blood loss, shows little tendency to recovery within the first ten days.

Not enough attention is paid to the disturbed physiology caused by some of the positions into which the anesthetized patients are placed on the operating table. Thoracic and abdominal expansion is often impaired by sand bags, prone positions, improper placement of braces, Trendelenberg and kidney positions.

A modification of position or hyperventilation of the patient's lungs should be done. The transient complications of anesthesia are all due to anoxia under one or another of the complicated mechanisms which produce it. An over supply should be available to the poor risk patient at all times, by mask, nasopharyngeal catheter or endotracheal tube. Airway management with suction removal of bronchial secretions and control of vomiting and gastric secretions are only some of the many problems to be anticipated. All patients who are to have surgery on the esophagus, stomach, duodenum, pancreas, biliary tract or small bowel should routinely have a Levin tube passed. If the case is one of intestinal obstruction, the preliminary passage of an endotracheal tube is a must. These cases generally regurgitate from a trickle to large amounts during operation. The poor risk patient usually cannot withstand the added insult of aspiration.

The technic of anesthesia most certainly extends into the immediate postoperative period if not beyond. Active participation should be the routine in the transportation, posturing, airway maintenance, fluid, blood and electrolyte maintenance

of the patient. The prevention and treatment of vomiting, pulmonary complications, postoperative depressions and shock should follow a rationale well organized routine to avoid the picture of confusion sometimes seen in these emergencies.

With modern anesthesia the technic begins with the preoperative consideration and preparation of the patient and extends through selection and carefully balanced use of several agents simultaneously, the supervision of supportive therapy and immediate postoperative care. The normal risk patient may survive negligence of any or perhaps all of these considerations. The poor risk patient often cannot tolerate this. He deserves a good risk anesthesiologist.

4125 Brookridge Drive.

BIBLIOGRAPHY

1. Burstein, C. L., and Hershey, S. G.: Circulatory Effects from Pentothal Sodium Administered Soon After Hemorrhage, Proc. Soc. Exper. Biol. 58-80, 1943.
2. Beecher, H. K.: Study of Shock Delaying Action of Barbiturates, Ann. Surg. 116-658, 1952.
3. Adams, R. Charles, and Luncy, John S.: Anesthesia in Cases of Poor Surgical Risk, Surg., Gynec. & Obst. 74-1011 (May) 1942.
4. Essex, H. C.: Anesthesia in Relation to Shock. Clin. Anes. 23, 1212-1220 (August) 1943.
5. Saklad, et al: Intraspinal Segmental Anesthesia, Anesthesiology 270-287 (May) 1947.
6. Burstein, C. L.: I. V. Procaine in the Management of Cardiac Disturbances, Anesthesiology 133-144 (March) 1949.
7. Foldes, F. J.: Some Problems of Geriatric Anesthesia, Anesthesiology 737-744 (November) 1950.
8. Cole, Frank: The Poor Risk Patient, Anes. & Analgesia 52-56 (January) 1951.
9. Clark, et al: Chronic Shock, Ann. Surg. 1-25; 618-648 (May) 1946.
10. Nicholson, M. J.: Anesthesia for the Poor Risk Patient, Anes. & Analgesia 28; 98-104 (March) 1949.
11. Dillon, J. B.: Anesthesia for the Aged, J.A.M.A. 977 (Dec. 13) 1947.
12. Foldes, F. J.: Physiologic. Basis for the Choice of Anesthesia, Agents and Methods, Pennsylvania M. J. 54:537-540 (June) 1951.
13. Stephens, et al: Diagnosis and Treatment of Hypotension During Anesthesia, Anesthesia 181-194 (March 1) 1953.

Giant, Penetrating Gastric Ulcers

. . . The importance of establishing a correct differentiation from cancer in these huge ulcers prior to definitive treatment is emphasized. . . . Surgical intervention is strongly advocated because of the uncertainty of the clinical diagnosis, the pronounced failure of the defects to heal, and the danger of massive hemorrhage. . . . a surgical method of managing such lesions involves the conversion of a situation which might demand total gastrectomy or resection of adjacent organs into one of partial gastric resection or closure of the defect in the gastric wall after dissection of the stomach from the ulcer margin.—Harrison H. Shoulders, Jr., M.D., Carl E. Lischer, M.D., St. Louis, *Archives of Surgery*, September 1953.

Fluoridation and Fractures

. . . Our observations prove that 226 parts per million of sodium fluoride in the drinking water of rats does not inhibit the repair of fractures, and they suggest that this may exert a slightly favorable influence on the process . . .—Richard T. Odell, M.D., J. Albert Key, M.D., St. Louis, *Annals of Surgery*, September 1953.

ADENOMATOUS POLYPS OF THE LARGE BOWEL

LEO J. LEBLANC, M.D.
AND
G. LYNN KRAUSE, M.D.
ST. LOUIS

The purpose of this paper is to set down some facts concerning polypoid disease of the large bowel and rectum. The hope is entertained that by continued and repeated discussions of this problem earlier and more accurate diagnosis will be made and prompt and definitive treatment carried out. The goal should be one of curability rather than one of palliation, which is all too often the case.

DEFINITION

By definition, a polyp or polypus is a pedunculated swelling or outgrowth from a mucous membrane. Adenomatous polyps vary in size from 1 or 2 millimeters to several centimeters. These tumors are usually globular in shape and dusky red in color. They may be attached to the mucosal lining by either a narrow or a wide base. Grossly, these lesions resemble a raspberry.

ETIOLOGY

It is quite possible that the etiology of polypoid disease is in some way tied in with the etiology of carcinoma. The poor prognosis of untreated familial polyposis lends support to this theory. Discounting the so-called familial polyposis cases there is an ever increasing number of reported cases of patients who harbour one or more adenomatous polyps and give a family history of colonic cancer. In fact it is not unusual to have patients voluntarily present themselves for colon and rectal investigations because they have had a parent die of carcinoma of the bowel. It is surprising how often a benign adenoma is picked up in these cases. Some people seem to have an intrinsic weakness to form polyps. These patients who are carefully watched every six months to a year will frequently "sprout" one or two single polyps at each examination.

Theories abound regarding the etiology of these tumors. A list of these theories includes: (1) the "mutation of genes" theory, (2) an inciting specific virus, (3) intraluminal trauma by foreign bodies in stool, (4) specific inflammatory disease. None of these is satisfactory. Suffice it to say "etiology is unknown."

INCIDENCE

Age.—Benign adenomatous polyps of the colon and rectum occur in all decades of life. They are not infrequently found in small children. In our files we have more than one hundred cases of adenomatous polyps in young children. We are

convinced that the commonest source of rectal bleeding in children is from rectal and colonic polyps and not from anal fissure as is so often stated.

The highest incidence of adenomatous polyps is in the fourth to the sixth decade—as is the incidence of carcinoma of the large bowel. Possibly if more sigmoidoscopic examinations were done on younger individuals this age incidence would vary considerably.

Sex.—The adenomatous polyp is found somewhat more frequently in the male sex. The incidence of colonic cancer likewise is higher in the male sex.

Distribution.—While adenomatous polyps may be located anywhere in the colon or rectum, they are more frequently found in the left colon. Approximately 70 per cent of all the polyps found in the large bowel are located within reach of the 25 centimeter sigmoidoscope. Of the remaining 30 per cent a great number will be located in the upper sigmoid and descending colon. It is interesting to note that while 70 per cent of adenomatous polyps are found within the lowermost 25 cm. of the gut track, likewise about 65 to 70 per cent of all colonic cancers are located in this segment of gut. The so-called "sentinel polyp" which is a small polyp, usually benign and closely associated with a frank carcinoma, is found roughly in about 20 per cent of resected specimens. It is difficult not to believe that the cancer that was just resected was not too long ago a "blood-brother" of the sentinel polyp. Knowing these figures serves to impress upon us the fact that if we are to cure more patients of bowel cancer we should find and eradicate adenomatous polyps.

Associated Pathology.—Anal pathology, i.e., anal fissure, hemorrhoids, fistula, is frequently associated with rectal and colonic polyps. In fact, the polyps are, in the main, discovered while doing a routine sigmoidoscopic examination as a preoperative measure previous to hemorrhoidectomy. When the combination of rectal polyp and hemorrhoids is found it is our practice to do a biopsy and eradicate the polyp in the office before hospitalizing the patient for hemorrhoidectomy.

DIAGNOSIS

If one is to make the diagnosis of a colonic polyp and institute early and rational treatment one will not depend on subjective symptomatology. A complete history of these patients certainly is in order. The single complaint of rectal bleeding usually not associated with pain makes one suspicious of a rectal or colonic polyp. It is well to remember that hemorrhoids bleed but so do polyps. One therefore must have a high index of suspicion in order to rule out polypoid growths in the patient whose rectal complaint is bleeding per anum. Many polyps are "silent" in that they do not bleed and are picked up only on sigmoidoscopic and roentgenographic investigations. In cancer detection work it would be well to emphasize here that every patient who presents himself with an abdominal or rectal complaint is entitled to a thorough digital and sigmoidoscopic examination. It is quite surprising in questioning patients who have undergone anorectal surgery to find how many have not had preliminary sigmoidoscopic investigation. Even at this late date, some have been subjected to anal surgery with only an external "look-see"—let alone a digital examination. In this light some 10 to 18 per cent of patients operated on for malignant disease of the rectum or colon have been subjected to anal surgery within a year preceding the discovery of the carcinoma—the lesion, obviously present, was missed.

It is common practice to do colon x-rays on patients without doing preliminary sigmoidoscopic examinations. This practice certainly is questionable when one considers the following facts: (1) 80 per cent of the lesions of the entire colon occur within reach of the twenty-five centimeter sigmoidoscope; (2) the lower twenty-five centimeters of tract is a "blind-spot" as far as the roentgenologist is concerned, and (3) many patients harboring a lesion in the upper reaches of the rectum and sigmoid have been completely obstructed because a so-called "G.I." series was carried out without first trying to locate the lesion in a more rational manner.

Digital and Anoscopic Examination.—Digital examination of the rectum is, of course, the first procedure to be done prior to any instrumentation.

Frequently hypertrophied anal papillae will be demonstrated by digital examination. Often they feel much like an adenomatous polyp on a pedicle. On viewing these lesions through the anoscope the diagnosis is simply a polypoid tumor covered with squamous cell epithelium. These papillae have a different prognosis entirely than the adenomatous polyp. They never become malignant whereas the adenomatous polyps have a "95" per cent chance of developing into a malignant neoplasm. Hypertrophied anal papillae are always located at the dentate line whereas polyps (covered by mucus-secreting epithelium) are found above the dentate line. The feel of a hypertrophic papilla is hard and fibrous-like in consistency, whereas an adenomatous polyp is soft and spongy-like.

Sometimes it is difficult to locate a polyp in reach of the finger because the feel is quite like redundant mucosa. However, when a scope is introduced with good light it is not difficult to demonstrate the lesion.

These points of differences are listed because the prognosis sometimes is quite different and an explanation to the patient is in order when treatment is indicated.

Sigmoidoscopy.—The intelligent use of the sigmoidoscope is invaluable in the diagnosis of

polyps. Sigmoidoscopy is an examination with which all should be familiar. It is a simple and innocuous procedure. It is, with few exceptions, an office procedure. The only preparation needed for the successful examination of the rectal vault and lower colon is one or two saline enemas. It is wholly unnecessary to give laxatives or cathartics preceding this examination. The taking of laxatives only serves to upset the patient and make a simple procedure into one of confusion and mess. The actual technic of the use of the scope is not part of this discussion but a few words of admonition are in order. Do not persist in the passage of the sigmoidoscope if the patient has pain. Do not use instruments on the patient "blindly." As soon as the instrument has passed the sphincter mechanism the obturator should be removed and the examination done under direct vision.

Reexamination of the patient is certainly in order if the first attempt is unsuccessful or barium studies are not informative. Frequently a second and occasionaly a third examination is indicated and gratifying results are the reward of these labors. It goes without saying that any suspicious lesion should be biopsied at the time of this examination. Multiple biopsies should be done, especially at the base of the lesion, if possible.

Roentgenographic Studies.—Barium studies of the colon, when done by a competent roentgenologist, are the most important diagnostic procedure at hand. Proper preparation of the patient is a "must" for the successful interpretation of barium fill-up studies. With some exceptions, the usual preparation is the taking of two ounces of castor oil after a light evening meal the night before the examination. The morning of the examination one or two plain water enemas are given.

Air contrast studies of the colon are certainly in order when polyps are suspected. The well trained x-ray man is equipped to do this procedure and it should be done on all patients in whom polyps are suspected.

Some roentgenologists believe that if polyps are suspected the ideal method of examination of the colon is to do a separate air study on a subsequent visit rather than insufflate the colon with air immediately following the barium evacuation. This is an important factor in the management of patients suspected of having polyps and if the roentgenologist requests this method of procedure one should cooperate with him.

Frequently our x-ray colleagues will ask for repeat examinations of the patient at an interval of a week or so in order to make sure that a suspected segment of bowel is without pathology. This is a highly commendable attitude and it is so frequently rewarding in ruling out disease of the bowel. Repeated x-rays of the bowel should be done more often. If symptoms persist and organic pathology has not been uncovered one is not doing his job thoroughly if he does not demand that a repeat examination of the colon be done. Often the third and, yes, the fourth and fifth examinations within a space of a few weeks will reveal the source of bleeding to be a single cherry size polyp in the upper reaches of the colon.

Judging from the number of bowel malignancies found in daily practice, we wonder if we should be satisfied with the number of polyps being discovered by x-ray means in that portion of the bowel above the reach of the twenty-five centimeter sigmoidoscope. This statement is made to bring home the point that if more malignancies of the colon were found when they are in the polyp stage we would certainly be curing more people with colonic cancer than we are at present.

Stool Examination.—Generally speaking, stool examination for occult blood is unrewarding when the presence of a polyp is suspected. In the face of negative sigmoidoscopic and x-ray studies of the colon and rectum a positive Guiac or benzidene test tells nothing.

Washings of bowel discharges for the presence of malignant cells does not seem practical in trying to establish a diagnosis of colonic polyp.

We, therefore, believe that it is a waste of time and money to do stool studies in suspected polypoid disease.

TREATMENT

Treatment of polyps of the colon and rectum resolves itself into complete removal by either electro-desiccation or surgical excision. The approach to these lesions is by two routes: (1) the intrarectal approach and (2) the transcolonic approach.

Polyps located in the rectal vault proper (15 to 17 centimeters from the dentate line) are managed from below, depending on the size and accessability of the lesion. We usually use the fulgurating electrode or electric snare through a ten inch sigmoidoscope. If the problem of postoperative bleeding presents itself we hospitalize these patients. No anesthesia is required to perform this maneuver. Occasionally a polyp is so large that it is easier to remove it through a widely dilated anus and if a more complete result is to be obtained by this procedure an anesthetic is given. The anus is dilated and the polyp is delivered and tied off without much difficulty.

Occasionally we will resort to dividing the external sphincter posteriorly to deliver a large polyp, and repair the muscle immediately with a good end result.

When we elect to remove polyps from the rectum and they are of small or average size we believe that special equipment such as a proctologic table, special fulgurating scopes, long fulgurating tips are necessary to do a through operation with dispatch. This is best done in our office where the equipment is readily available. A hospital bed therefore (so precious now-adays) is

freed for some other patient. Multiple sittings are frequently necessary if the patient cannot tolerate too much manipulation in the inverted position. It goes without saying that follow-up examinations are a "must" to be assured that the entire lesion has been destroyed and that no new ones are found.

Lesions (polyps) located above the 17 centimeter level are removed by transcolonic excision. These patients, of course, are prepared in the same manner as those who are subjected to any type of bowel surgery. The problem entailed in handling these lesions via the abdominal approach are quite different and encompass all the complications of any abdominal exploration. It is a good policy to have in readiness sterile sigmoidoscopes at surgery in order to rule out any lesions which may have been missed in preliminary studies.

Because of the danger of uncontrollable bleeding and peritoneal irritation or both or perforation, the approach to lesions which lie above the 17 to 20 centimeter level is usually carried out transabdominally. Of course, if the lesion is a small sessile polyp which can be destroyed with the fulgurating electrode under anesthesia, this approach is preferable to colotomy.

These polyps are discovered by barium x-ray of the colon and as this is the only evidence available, it is always important to have repeated x-ray studies made, at least a second study, to demonstrate that the persistent filling defect is a polyp and not an artifact or fecaloma.

It should be a practice of all surgeons who are opening abdomens in the third or sixth decade of life to palpate the large colon as a routine measure. Many "silent" polyps would be found if this were done and speaking from a prophylactic standpoint, all would be curing more cancer of the bowel. Transcolonic excision of polyps is not done often enough. If it were, there would be more patients "cured" of colonic cancer.

Follow-up studies are important in patients in whom polyps are found. It is good and cheap insurance to have a six month or yearly study of the rectum and colon in these patients. Frequently, a second polyp is found in these routine "check-ups" and early treatment is then possible.

SUMMARY AND CONCLUSION

Ademomatous polyps of the large bowel and rectum are discussed. The idea is entertained that constant and repetitious papers of this type will help to make earlier diagnosis of lesions which are potentially malignant.

Management of these lesions is outlined briefly, including diagnosis and treatment.

3720 Washington Blvd.

Advertisement

From where I sit *by* Joe Marsh

One for the Books!

Noticed the Missus had a red ribbon tied around her finger at breakfast one morning last week. "What's that for?" I asked. "Memory slipping?"

"It's not for me," she answers, "it's to remind you, *and everybody else who asks what it's for, to contribute to the Woman's Club Library Fund. We need $200 and we figured we'd get more help if we could get people to ask* us *about it."*

Well, as it turned out, the red ribbon worked just fine. The ladies are having the library all fixed up—and there's enough money for some new books, too.

From where I sit, it would be a fine thing if we had some sort of private reminder when we forget the rights of others. Like when we start telling them how to practice a profession or what to choose for a beverage. I like a travel book and a temperate glass of beer—while you may prefer a cup of tea with a historical novel. But let's not "put the finger" on one another.

Joe Marsh

Copyright, 1953, United States Brewers Foundation

Postgraduate Review

CURRENT THOUGHTS ON CARDIOVASCULAR THERAPY

O. P. J. FALK, M.D.
ST. LOUIS

THE DRAMATIC advance of surgical technic in the correction of certain types of congenital and acquired heart disease and the incredible ingenuity displayed in the correction of the associated physiologic imbalances is a study quite outside the scope of this report on medical progress in the field of cardiovascular therapy. These advances have been characterized by a gradual and almost imperceptible dawning of medical enlightenment based upon careful clinical and experimental investigation and subsequent controlled bedside observation.

Somewhere betwixt the pall of therapeutic nihilism and the mirage of therapeutic exuberance lies a rather firm terrain that might be described as therapeutic Hedonism. In Greek philosophy, Hedonism is a concept that urges utilizing only the proven good and making the most of it, never in excess but always in moderation.

THE PROBLEM OF HYPERTENSION

Contemporary trends in the management of hypertension through recent decades have blundered along the paths of various dietary procedures, psychotherapeutic endeavors, certain surgical procedures, sedation and other pharmaceutic approaches until the present time, when the most favored survivals and accepted procedures, aside from the fundamental requisites of protective and adaptive living habits, appear to include low sodium diet, comprehensive sympathectomy under carefully selected circumstances and the following drugs: veratrum viride preparations, hydralazine (Apresolin), the various methonium compounds and renewed interest in a previously investigated drug[1] which I have had opporutnity of observing first hand during the last few months, Rauwolfia serpentina. I have found veratrum viride impractical because of the slim margin between therapeutic efficacy and toxic effect, hydralazine (Apresolin) rather complicated in its application and not suitable for treatment of the average uncomplicated severe hypertensive case, and the methonium compounds too unpredictable orally and less easily controlled parenterally than certain new Veratrum preparations.[2] For the control of hypertensive cerebral crises, ampules for intravenous and intramuscular use are now available. Alkavervir (veriloid) ampules represent a concentrated hypotensive portion of Veratrum viride which reduces pressure through central action and resultant arteriolar relaxation. It is a highly potent, stable and uniform substance obtained by fractionation and standardized by biologic assay using the normotensive dog as the test animal.

It is obtainable in 5 cc. ampules for intravenous use, each ampule representing 0.4 mg. in .25 per cent acetic acid. In cases in which immediate lowering of blood pressure is desirable in hypertensive crises of whatever nature, 0.15 cc. of the solution for each ten pounds of weight (the average for a 150 pound person being 2 cc.) is diluted with 10 cc. of saline solution or 5 per cent glucose. Initially one half cc. per minute for eight minutes is given with continuous blood pressure observation. Unless systolic or diastolic pressure has dropped 20 points, continue after two minutes with ½ cc. a minute for six more minutes. After two minutes continue the remainder at ½ cc. per minute, a total of 10 cc. unless systolic or diastolic pressure has fallen to around 150/100 which is a recommended optimum. Following this, hypotension may be maintained as long as desired or feasible by 1 or 2 cc. of veriloid intramuscularly every three to six hours as needed (1 mg. to each cc. containing procaine) available in 2 cc. ampules. Occasional side effects are substernal or epigastric burning, salivation, nausea and vomiting such as occasionally follow oral Veratrum viride. Oral tablets of Rauwolfia serpentina combined with veriloid are available for follow-up therapy after the desired effect of parenteral treatment has been attained.

In a current series of severe benign hypertensive patients I have found that the two types of Rauwolfia serpentina I have had under investigative surveillance have not only produced a significant reduction in both systolic and diastolic levels but usually have given the patient a sense of well being, quite in contrast to the frequent distressing side effects of other drugs in current use. Rauwolfia is available in 50 mg. coated tablets of the crude preparation (the average dosage being 100 mg. twice daily) and also in concentrated and purified form as 2 to 3 mg. tablets. These are given one morning and evening but can be doubled where indicated without disturbing effects in my experience.

Rauwolfia serpentina (Ophioxylon serpentinum) has been used in India for many years to treat a variety of diseases that on first thought appeared to have little in common, such as epilepsy, insomnia, eclampsia and hypertension. There could be a common denominator in the symptomatic relief given by a slightly sedative and relaxing drug such as Rauwolfia. The attention of Wilkins and Judson,[3] as reported before the New England Cardiovascular Society in February 1952, was drawn to the drug because of

From Department of Internal Medicine, St. Louis University.

reports of its hypotensive effects and the rather conservative reports by several authors including Bhatia[4] in 1944 and Gupta and Kahali[5] in 1943. Vakil[6] presented a paper in 1949 reporting a ten year personal experience, fortified by a favorable report from forty-six of fifty Indian physicians polled by mail. Wilkins and Judson[3] confirmed the moderate hypotensive and symptomatically beneficial effect of the drug and also its apparent synergistic effect in combination with Apresolin or Veratrum viride. These observers found the drug well tolerated for months, producing but few mild side effects such as occasional bradycardia, nasal congestion and tendency to weight gain, none of which have proved troublesome in my series. In my observation Rauwolfia presents a valuable addition to available present day therapy in uncomplicated hypertension severe enough to warrant an attempt at blood pressure reduction.

The summary of a recent panel on the treatment of hypertension at the Philadelphia session of the American College of Physicians in April 1953 was that Apresolin and the methonium compounds were sufficiently effective in the treatment of malignant hypertension to be encouraging and that the prognosis for these patients was considerably brighter today than a few years ago. Alternate or adjunctive modes of therapy proposed were Veratrum viride, low sodium diet, Rauwolfia compounds, sedation and avoidance of mental, physical and emotional strain.

SYMPATHECTOMY

Any patient under 55 with either a persistent diastolic pressure over 130, not responding to accepted medical measures, or showing a relentless progression of the disease from a benign to a more malignant form, is a candidate for sympathectomy, provided he shows fair renal function and no signal degree of cardiac pathology. My criteria for the latter is the absence of striking hypertrophy, uncorrectable myocardial insufficiency or coronary failure with angina on slight effort or at rest. Healed myocardial infarction more than six months previous, or fair myocardial capacity, even though requiring maintenance digitalis, is not a contraindication provided the subject can meet the ordinary demands of every day living without discomfort. Most other preoperative studies made on these subjects are comparatively of little value and may be misleading.

CORONARY ARTERY DISEASE

Recent investigations have influenced the current concept of coronary disease and suggested certain modifications in treatment. This disease is responsible for 10 per cent of all deaths and one half of cardiac deaths in the male population of this country today.

The accepted current concept is that some degree of coronary occlusion must be suspected wherever angina suddenly develops or increases in intensity in the absence of early congestive failure in a hypertensive or valvular heart. Any subsequent infarction depends upon the speed with which adequate collateral coronary circulation develops. Any sustained reduction in coronary flow may result in myocardial necrosis, particulary if excessive demand is made upon the heart, before coronary circulation is reestablished in acute coronary insufficiency. Careful management with adequate narcotic relief (intravenously when severe) and immediate curtailment of physical activity and oxygen therapy is mandatory if actual infarction is to be forestalled or its ultimate extent limited to a minimum. For the control of premature ventricular beats and tachycardia occurring in the course of occlusion, procaine amide has been shown to be of distinct benefit and possibly of slightly lesser toxicity than quinidine, although the latter is still justifiably employed where arrythmias occur.

ANTICOAGULANT THERAPY

In the present state of knowledge the prompt employment of anticoagulants also appears justifiable at the onset of the attack, at least until its severity is determined. There exists today a growing feeling that anticoagulant therapy does not appear to be justified as a routine measure in all cases of myocardial infarction in the effort to minimize complications. I[7] have been using it in a more selective manner on my hospital service for the last two years. My experience has been that the probability of a fatal outcome or of a thrombo-embolic complication is almost negligible in the well managed "good risk" patient, that is, one who does not early in the attack present ominous signs or symptoms such as severe prolonged shock, history of a previous attack, intractable or recurrent pain, congestive failure, gallop rhythm, auricular fibrillation or ventricular tachycardia. The majority of sudden deaths that do occur come within the first forty-eight hours and are caused by either ventricular fibrillation, myocardial rupture, congestive heart failure or shock with circulatory failure, none of which could have been influenced by anticoagulant therapy anyway. It would appear that the actual reduction in potential mortality from anticoagulant treatment is undoubtedly considerably less than gross statistics would indicate in the less severe, uncomplicated attacks of myocardial infarction.

Experience with the various oral anticoagulants has warranted current employment of phenindione (Danilone) on hospital service as the most constant and dependable drug thus far available. In an extremely severe case I give 100 mg. of Heparin intravenously, then 50 mg. every six hours for the first twenty-four hours, and 100 mg. of Danilone concurrently at the outset of treatment and vary the subsequent dosage as indicated by prothrombin levels. It has been my experience that this drug tends to level off more readily

than other oral anticoagulants. It has more often than not been possible to carry the case along at a level between 15 and 30 per cent with a 50 mg. a.m. and 25 mg. p.m. daily. When the level does become fairly constant it may well be feasible to carry on the anticoagulant program safely with prothrombin levels determined only every second day, a boon to both the patient and the laboratory personnel.

REDUCTION OF ENFORCED BEDREST

Another trend in present day management of myocardial infarction is the dawning realization that shortening the orthodox four to six week period of bedrest is not only safe but probably salutary. My own favorably responding cases, not designated as "poor risk" by the criteria described, are allowed to sit up in the third week and to walk about the room during the fourth. Available evidence suggests that while there is every advantage in prolonged restriction of physical activity, little is to be gained by prolonging the period of actual bedrest after the danger of myocardial rupture or ventricular fibrillation is past, which lethal complications are a threat during the first fortnight and are extremely uncommon thereafter. Among the disadvantages of prolonged recumbency are reduced circulation in the pulmonary bases and increased tendency to peripheral venous thrombosis and ensuant pulmonary infarction. Disturbed nitrogen and calcium balance and the possibility of psychic trauma and undue cardiac anxiety nurtured by protracted bedrest are all potential hazards to be reckoned with and cannot be discounted as important influences aiding satisfactory recovery and ultimate return to functional capacity. The cardinal objective in the management of myocardial infarction should be to save life, but the second objective, that of preparing the subject for further useful living, free from unwarranted anxiety or undue cardiac consciousness, too often has been neglected. Levine[8] reports a mortality of only 10 per cent in seventy acute coronary thrombosis patients who were placed in a chair for varying and increasing periods beginning the second week of the attack. He feels that results are encouraging and appear to have both physical and psychic advantages over strict bedrest for the traditional four to six week period.

HEPARIN THERAPY IN CHRONIC CORONARY INSUFFICIENCY

Evidence has been accumulating that Heparin may play a role in lipoprotein metabolism, probably not connected with any anticoagulant or vasodilator action. Engelberg[9] reports twenty-nine cases of severe angina, studied six to twelve months, in which anginal attacks were reduced 58 per cent by 25 to 100 mg. of Heparin intravenously twice weekly. These had failed to respond to previous treatment, possible suggestion having been eliminated by intercurrent placebo measures. No dangerous reactions were encountered. Since intravenous Heparin produces maximum prolongation of clotting time in ten minutes which dwindles during a six hour period to naught, any beneficial effect on angina could not possibly have been from anticoagulant action. On the other hand, Binder and Kalmonson[10] report a series of thirty-four moderately severe angina subjects in which they were unable to demonstrate any beneficial effects from biweekly intravenous Heparin injections. Their results were carefully checked by alternating Heparin with saline solution at monthly intervals. The status of Heparin in the prevention of coronary accidents is obviously debatable, the evidence thus far being anything but conclusive. It may well be that this approach will fall into the limbo of discarded measures such as befell the short lived vogue of vitamin E in cardiovascular therapy, a gesture that proved to be a therapeutic perpetration.

SHOCK AFTER MYOCARDIAL INFARCTION

In a careful study of shock following myocardial infarction, Finke and d'Angio[11] reported in April 1953 that cases with low venous pressure responded to Neo-synephrin with a rise of both venous and arterial pressures. Plasma produced similar results when used in conjunction. They observed that cases with high venous pressure responded to Lanatoside "C" by a rise in arterial and in some cases by a fall in venous pressure. These were the cases in severe congestive failure in which intravenous plasma, intra-arterial transfusion and Neo-synepherine would be contraindicated. Mephentermine (Wyamine sulphate*) raises blood pressure by producing peripheral vasoconstriction and fulfills certain of the theoretical requirements for combating shock complicating severe myocardial infarction, which entails additional myocardial damage superimposed upon the initial insult from the occlusion itself. Studies in dogs have demonstrated increase in coronary flow following Mephentermine. fifteen mg. is given slowly intravenously, the blood pressure and pulse begin carefully recorded during administration. This brings about controllable elevation in blood pressure for from thirty to forty-five minutes, after which maintenance can be attained by giving intramuscular injections, the effect of which begins in five to fifteen minutes and response is prolonged for one to two hours. Any minimal blood pressure response is satisfactory although sustaining pressures at more optimal levels is permissable. The criteria for this method include a systolic pressure of 80 or less persisting for at least four hours in the wake of an established infarction, thus limiting its use to cases with an extremely grave prognosis, which would appear desirable in view of the unknown effect of Nor-epinephrine upon an irritable myocardium.

* Wyeth, Inc.

CORTISONE IN MYOCARDIAL INFARCTION

The use of Cortisone has been reported by Johnson and his coworkers[12] who observed that Cortisone following coronary ligation in dogs resulted in a pronounced decrease in the size of the resultant infarction, the treated group developing infarcts approximately one seventh the size of those in the controls. Microscopically the treated hearts showed a decrease in fibroblastic proliferation, and a sharp line of demarcation between the damaged and healthy myocardium. Furthermore fatigability, loss of appetite and interest in general, appeared significantly less in the treated dogs. Whether these observations have clinical application in man remains to be demonstrated, but the potentialities as suggested by Johnson's observation are intriguing. For short term, ten day management with low sodium intake, it is doubtful whether retention of sodium and water would offer any striking hazard over a limited period nor should a preexisting hypertension be aggravated by a carefully controlled regime. The reported increase in coagulating properties of Cortisone would be neutralized by concomitant anticoagulant therapy even if they would constitute a tangible contraindication. I have not used Cortisone in the past, but am beginning observations on it. Johnson's group[13] have used Cortisone in thirty-five cases. Only the dawn of knowledge of these potent hormones is being witnessed. Only conjecture can give a glimpse of what the day of full enlightenment will disclose.

TREATMENT OF CONGESTIVE HEART FAILURE

Congestive heart failure is really a combination of both forward and backward failure. It is due to a dysfunction of the heart muscle with diminished cardiac output associated with salt retention by the kidney. Salt and consequent water retention produces increased blood volume and therefore increases cardiac load. It is conceded today that the relief of the extracardiac factors is probably of even greater importance than efforts at increasing the cardiac output itself.

In addition to the elementary indications for comprehensive management such as adequate narcotic relief (intravenously in severe cases), and oxygen with complete physical rest to minimize metabolic needs, one must provide for sufficient foot and leg movement to discourage venous stagnation. Full expression of Digitalis therapy is essential for both the cardiac and extracardiac factors. Digitalis not only slows the heart and increases the minute output, but also acts as an enzyme by releasing sodium from the extracellular spaces. Oubaine intravenously should be used only in emergencies as it does act in from fifteen to twenty minutes. Otherwise, the time honored Eggleston formula is still applicable. In an emergency, when the exact amount of Digitalis taken is not known, one has to depend upon the symptoms and signs. Dietary regulation is based upon a low sodium, liberal fluid program. The old Karrell 200 cc. of skimmed milk every four hours for the first two days yields only 1 gram of sodium and constitutes a logical initial intake program. The use of low salt milk powder (Lonalac) plus sugar is a sensible modification. In contraindication to hypertensive management, when an effective low sodium program entails a maximum intake of 500 mg. of salt, congestive heart failure may be allowed up to 2 or 3 grams with impunity. Resins are useful if they can be taken without distension or constipation. One has to be on the lookout for restlessness or nausea as signs of salt depletion, preferably controlled by the flame photometer, in which case one liter of 2 per cent sodium chloride should be given intravenously.

HYPOGLYCEMIA IN HEART FAILURE

The not too uncommon occurrence of hypoglycemia occurring in congestive heart failure due to interference with liver function was reported recently by Mellinkoff and Tumulty.[14] Hypoglycemic episodes were encountered in five cases of congestive heart failure with chronic passive congestion among twenty hypoglycemic instances. The other fifteen were caused by hepatic cirrhosis and fatty infiltration. These episodes were generally misinterpreted at first and occasionally proved fatal. They were characterized clinically by weakness, irrational behavior and even coma in one instance. The diagnosis was confirmed by blood sugar readings and noting that small amounts of concentrated glucose intravenously produced a striking improvement. Low blood sugar may be the first clue to hepatic damage, the mechanism being somewhat obscure, the most probable explanation an inability of the liver to store glycogen in long standing chronic passive congestion. This observation justifies clinical alertness to this possibility, particularly since loss of appetite and malnutrition are so common under the circumstances.

MERCURIAL DIURETICS IN ACUTE CONGESTIVE FAILURE

While this measure does supplement adequate narcotic relief, oxygen, rest, low sodium intake and digitalis, it is not an adequate substitute for them. We have used most of the mercurials and have noted no essential difference in their effectiveness. Coated ammonium chloride tablets given one or two days before the injection often increases diuresis. If mercurial fastness develops, wait two days and change to another type of mercurial with the addition of ascorbic acid and also ammonium chloride tablets. Ten cc. of a 20 per cent solution of dehydrocholic acid (Decholin) added to a mercurial frequently enhances the effect. When all of these measures fail, a combination of 10 cc. of Decholin, 500 mg. of ascorbic acid given in 50 cc. of 50 per cent glucose followed by an intravenous mercurial will sometimes be effective.

Southey tubes are still used, and I have found them effective in obstinate cases. In prolonged congestive failure I[15] have used minimum therapeutic doses of radioactive iodine (I 131) to lessen the metabolic demand upon the myocardium with encouraging results.

The chain of events which follows in congestive heart failure includes renal retention of salt and water with consequent edema, elevated venous pressure in an already overworked myocardium laboring under the handicap of increasing myocardial damage. All of these factors must be taken into consideration in any program of comprehensive control with the hope of reducing mortality and enhancing the possibility of restoring functional capacity. In the interest of the latter, I advise early ambulation beginning with foot and leg movements with deep breathing exercises, elastic bandages to the legs and sitting up (in a rocking chair preferably) following control of the acute symptoms. Rocking entails some shift of body fluids in the circulatory bed as well as quadriceps and lower leg muscle movements, thus encouraging venous return from the lower extremities. After the acute phase of dyspnea has been relieved, any measure that amplifies venous flow is salutory, in that it lessens the probability of phlebothrombosis with the danger of thrombo-embolic incidents lurking in the offing. Severe congestive heart failure shows about 30 per cent incidence of thrombo-embolism on postmortem examination, thus justifying anticoagulant therapy. I[15] feel that areas of occult pulmonary infarction are the probable cause of the fever and increased sedimentation rate so frequent after severe protracted failure. I employ 100 mg. of aqueous Heparin intravenously at once and follow it with 50 mg. every six hours for the first twenty-four to thirty-six hours in the meantime beginning phenindione (Danilone). These areas of pulmonary infarction result from stagnation and attendant local pulmonary thrombosis, and are probably formed in situ even more frequently than borne from the lower extremities, but the indications for anticoagulant therapy are identical, in a particularly serious case.

VENOUS THROMBOSIS AND PULMONARY EMBOLISM

Aside from the accredited anticoagulant methods which have been described, the most important factor to consider is a program of prophylaxis. Prevention should begin early in acute cardiac episodes. In surgical cases it should begin on the operating table by careful technic with avoidance of undue pressure in certain vulnerable areas. Postoperative elevation of the foot of the bed is important and deep breathing exercises once an hour accompanied by foot movements and bending at the knees as soon as practical are effective prophylactic measures. Early ambulation has proven to be a significant boon in the reduction of these incidents. When the patients do begin to walk about they should wear regular shoes, not slippers without heels.

BACTERIAL ENDOCARDITIS

Even after ten years of antibiotics the treatment of bacterial endocarditis still remains a difficult problem, being a relatively common occurrence in the course of chronic rheumatic valvulitis and congenital heart disease. In spite of the increased available antibiotics the overall mortality lingers between 20 and 30 per cent, although most deaths in current series are caused by complications such as congestive heart failure or embolic incidents. Early recognition and control of the infection is imperative if irreversible valvular and myocardial damage is to be avoided and major emboli prevented. While it is of signal importance to identify the infecting organism and check sensitivity tests with various antibiotics, there are occasional instances in which one is justified in initiating antibiotic therapy without the specific organism being identified, such as when the situation appears grave and the time element important. The longer infection on the valves endures, the more difficult it is to eradicate. Presented with a case in which the septic state has progressed to an advanced stage, perhaps through previous mistaken diagnosis and in which the diagnosis seems highly plausible, four to six blood cultures can be taken at two hour intervals in one day and treatment started without waiting for the results. This program can be modified later if the patient's response or the culture findings justify.

The treatment of Streptococcus viridans endocarditis is quite satisfactory, as patients are nearly always controlled by a two week course of from 10 to 15 million units of penicillin daily with the addition of one or two grams of Streptomycin daily. The latter appears to enhance the bacteriolytic effectiveness of penicillin. Streptomycin eighth nerve toxicity can be minimized by using the combination Streptomycin and Dihydrostreptomycin which is now available. In the treatment of bacterial endocarditis renal penicillin loss can be minimized by the use of Benemid[16] a development of the original caronamid which I[17] found effective in maintaining penicillin concentration at high blood levels in conditions in which a sustained high level was imperative.

The experience of recent years suggests that the relative incidence of viridans endocarditis has decreased in favor of the enterococcus type and relatively more cases of penicillin resistant Staphylococcus infections are being encountered. The most complicated therapeutic problems emanate from such types, together with those in which no organisms are obtained or in which there is a variety of unusual organisms. The choice of antibiotics in such situations depends upon careful selection of one or a combination that offers the best probability of sterilization of the vegetations.

This cannot be accomplished by bacteriostatic substances such as the sulfonamides or the newer broad spectrum antibiotics. As a matter of fact antagonism between such agents and penicillin has been noted in vitro so that their combination with penicillin should generally be avoided in bacterial endocarditis. Here again the optimum treatment would largely depend upon sensitivity tests which must be carried out with the greatest of bacteriologic precision.

Enterococcus infections usually can be controlled by a daily penicillin dose of from 10 to 20 million units plus the combination Streptomycin described, along with Benemid for a period of six weeks, in contrast to the two weeks of treatment frequently effective for the viridans type. Although most enterococci appear to be sensitive to Aureomycin, Terramycin and Chloromycetin, clinical results with these three have been disappointing in scanning the literature on the treatment of bacterial endocarditis. Of course, in the rarer Staphylococcus case one will have to resort to these broad spectrum types. In addition, if the organism is resistant to penicillin, as a good many appear to be today, although relatively high blood concentrations may prove effective.

18 S. Kingshighway.

BIBLIOGRAPHY

1. Wilkins, Robert W.: Recent Experience with the Pharmacologic Treatment of Hypertension, Symposium on Hypertension, The Minnesota Press, pp. 492-501, 1951.
2. Stanton, J. R.; Freis, E. D., et al: Studies with Purified Preparations of Veratrum Viride Given Intravenously in Man, Circulation, in press.
3. Wilkins, Robert W., and Judson, W. E.: The Use of Rauwolfia Serpentina in Hypertensive Patients, New England J. Med. **248**:48-53 (Jan. 8) 1953.
4. Bhatia, B. B., and Kapur, R. D.: Pharmacological Action of Alkaloids of Rauwolfia Serpentina, India J. Med. Res. **32**:177, 1944.
5. Gupta, J. C., and Kahali, B. S.: Comparative Pharmacology of the Total Alkaloids of Rauwolfia Serpentina, India J. Med. Res. **31**:215, 1943.
6. Vakil, R. J.: A Clinical Trial of Rauwolfia Serpentina in Essential Hypertension, Brit. Heart J. **11**:350, 1949.
7. Falk, O. P. J.: Treatment of the Cardiac Complications of Hypertension, J. Missouri M. A. **49**:188 (February) 1952.
8. Levine, Samuel A.: The Myth of Strict Bedrest in the Treatment of Heart Disease, Am. Heart J. **42**:406-413 (September) 1951.
9. Engelberg, H.: Heparin Therapy of Severe Coronary Atherosclerosis, Am. J. M. Sc. **224**:487-495 (November) 1952.
10. Binder, Maxwell J.; Kalmanson, George M., et al: Clinical Evaluation of Heparin in the Treatment of Angina Pectoris, J.A.M.A. **141**:967-970 (March 21) 1953.
11. Fink, Theodore R.; d'Angio, Carl J., et al: Clinical Study of Shock Following Myocardial Infarction, J.A.M.A. **151**:1163-1165 (April 4) 1953.
12. Johnson, A. S.; Scheinberg, S. R., et al: Effect of Cortisone on Experimentally Produced Myocardial Infarction, Harper Hosp. Bull. **9**:187 (November and December) 1951.
13. Johnson, A. S.: Personal communication.
14. Mellinkoff, Sherman, and Tumulty, Philip A.: Hepatic Hypoglycemia in Heart Failure, New England M. J. **247**:745-750 (Nov. 13) 1952.
15. Falk, O. P. J.: Chapter on "Congestive Heart Failure" from Current Therapy, edited by Howard F. Conn, Philadelphia, W. B. Saunders Co. 1953.
16. Burnell, James M., and Kirby, William M.: Elevation of Penicillin Levels by Benemid, J. Clin. Invest. **30**:697-700 (July) 1951.
17. Falk, O. P. J.; Agar, D., and Sweet, H. D.: Effect of Coronamide on Penicillin Therapy, Southern M. J. **41**:326-336 (April) 1948.

Backing Words With Deeds

. . . This newspaper believes there is a definite need for a hospital in Jefferson County, and for that reason has been calling the matter to the attention of the people for the past two or three years. The recent survey showed that the majority of people want a hospital and are willing to support the project with their dollars. . . . The people in this county have been dependent upon St. Louis hospitals through the years, and due to the increased population and wealth of the county, the time has come to do some things for themselves.—Editorial, *Festus Democrat.*

Distinction Without a Difference

There is little difference between Socialism and Communism—if any. . . . Both are immoral philosophies of government. . . . Americans who love their country and who strive earnestly and constantly to preserve the nation's traditional free incentive system do not dare to be "nice" in fighting Socialism-Communism. . . . Far better to be classified as a "negativist" but respected for unequivocally and unwaveringly supporting the high principles of Freedom, than to become the pleasing appeaser and finally be ground under the heel of socialistic-economic enslavement.—*Newsletter,* Association of American Physicians and Surgeons.

City View Sanitarium

Established 1907

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

NASHVILLE, TENNESSEE

SECLUSION MATERNITY

FAIRMOUNT HOSPITAL

For Unmarried Girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for Information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

Case Report

ABERRANT RENAL ARTERY CAUSING PAIN WITHOUT OBSTRUCTION

JULES H. KOPP, M.D.
ST. LOUIS

ABERRANT RENAL arteries are usually associated with symptoms characteristic of urinary back pressure or obstruction of the upper urinary tract. Ockerblad recently reported cases of aberrant renal arteries causing pain without the usually associated evidences of obstruction. I wish to present a case similar to his. This presentation emphasizes the value of complete urologic examination in cases of unexplained abdominal pain.

CASE REPORT

Mrs. A. B., a 33 year old female, was referred to me because of pain of unknown etiology in the right lower quadrant. Pain was first noticed fifteen years ago and was mild but had gradually become more frequent and more severe until now oral medication no longer gave relief. Physical examination was essentially normal except for tenderness in the right lower quadrant, a bicornuate uterus and spina bifida seen on x-ray.

Fig. 1. Retrograde pyelogram showing abnormality of right kidney, normal left kidney.

Cystoscopic examination revealed a normal bladder and normal ureteral orifices. Retrograde pyelograms revealed normal outline of the kidney pelvis and ureter on the left side. The right kidney showed The uretero-pelvic junction apparently laid anteriorly with the calyces directed anteriorly and medially. The kidney was slightly lower than normal.

The kidney was exposed through the usual right lumbar incision. At first examination there appeared to be a band constricting the kidney, giving it a lobulated appearance. This band was dissected free and found to be a small artery originating from the renal artery at the hilus of the kidney and terminating in the perirenal tissues on the posterior aspect of the kidney. This vessel was clamped and doubly ligated and, when the pressure on the kidney was relieved, no increase in size but was congenitally malrotated. the kidney assumed its normal shape. The ureter was not long enough to allow the kidney to be brought up as high as one would have liked to but it was placed in as nearly the normal position as possible by a nephropexy, using ribbon gut. The patient was returned to her room in good condition. She has been seen postoperatively for the last seven years and has remained free of pain during this time.

Fig. 2. Intravenous pyelogram six months postoperatively.

SUMMARY

Pain in the right lower quadrant due to an aberrant renal artery causing constriction and rotation of the kidney, without evidence of obstruction of the urinary tract, is reported.

508 N. Grand Ave.

BIBLIOGRAPHY

Ockerblad, Nelse F.: Aberrant Renal Arteries Which In Themselves Produce Pain, J. Urol. 67:6 (June) 1952.

From the Department of Urology of the St. Louis Jewish Hospital. Aided by Louis M. Monnheimer Research Fund.

...from Two Outstanding Cases

RED LABEL • BLACK LABEL

Both 86.8 Proof

Johnnie Walker stands out in its devotion to quality. Every drop is made in Scotland. Every drop is distilled with the skill and care that come from generations of fine whisky-making. And every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.

BORN 1820...

STILL GOING STRONG

JOHNNIE WALKER

BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, Inc., New York, N. Y., *Sole Importer*

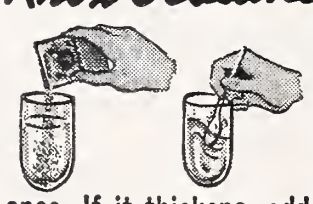
"To Your Patient's Health!"

Good nutrition and good health go hand in hand! Knox Concentrated Gelatine Drink is a worthy protein dietary adjuvant where high protein diet is indicated.

First used by the profession in this form about fifteen years ago, increasing clinical usage demonstrates its professional acceptance. Up to 60 grams of Knox Gelatine in the concentrated drink have been administered daily with no allergic reactions.[1] It contains 25 per cent glycine and 7 out of 8 essential amino acid, as well as 9 other accepted aminos. Knox Gelatine is low in sodium, has a pH of 6.2-6.4, is pure protein with no sugar and no flavoring.

1. Reich, C., and Mulinos, M. G., Treatment of Refractory Nutritional Anemia with Gelatine. Bull. N.Y. Med. Coll. March 1953.

How to Administer Knox Gelatine Concentrate Drink!



Each envelope of Knox Gelatine contains 7 grams which the patient is directed to pour into a ¾ glass of orange juice, other fruit juices, or water, not iced. Let the liquid absorb the gelatine, stir briskly, and drink at once. If it thickens, add more liquid and stir again. Two envelopes or more a day are average minimal doses. Each envelope contains but 28 calories.

For Your Patient's Protection!

Be sure you specify KNOX so that your patient does not mistakenly get factory-flavored gelatine dessert powders which are 85% sugar.

You are invited to send for brochures on diets of Diabetes, Colitis, Peptic Ulcer...Low Salt, Reducing, Liquid, and Soft Diets.

KNOX GELATINE, JOHNSTOWN, N.Y. Dept. JMS

Available at grocery stores in 4-envelope family size and 32-envelope economy size packages.

KNOX GELATINE U.S.P.

ALL PROTEIN NO SUGAR

Special Article

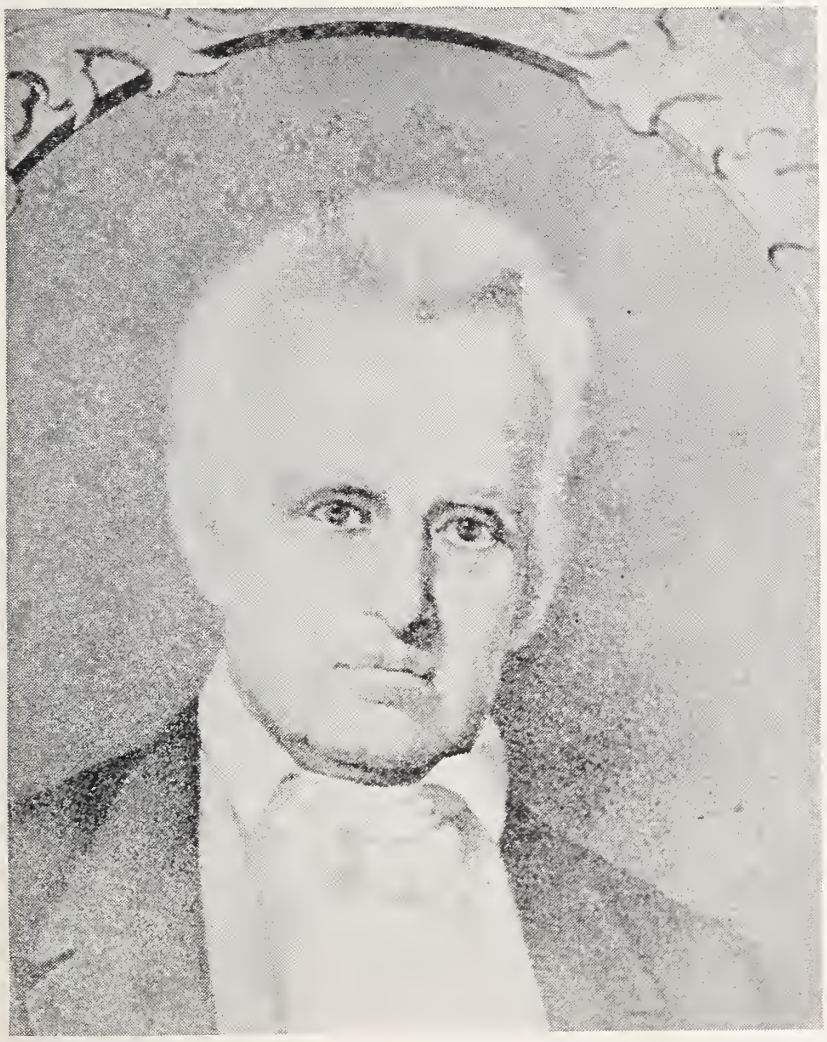
JOHN SAPPINGTON, M.D.
1776-1856

Physician of the Missouri Frontier and Fighter for Truth and Humanity

THOMAS B. HALL, M.D.
KANSAS CITY

Author of the first medical book written west of the Mississippi, early, persistent and effective opponent of the dominant Antiphlogistic School, largest user of quinine in America (one order was for 500 pounds), Sappington came from Tennessee to Missouri Territory in 1817, settling near Arrow Rock. His practice grew apace and within ten years extended from Jefferson City to Lexington.

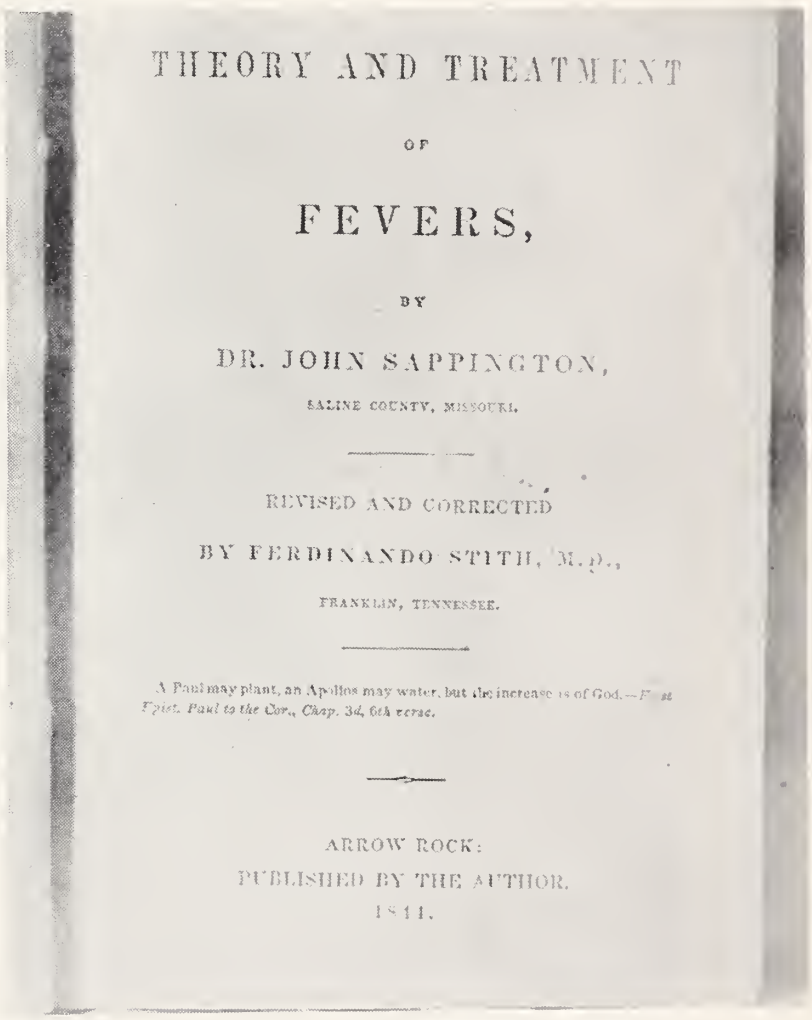
As soon as quinine (isolated in 1820) became available, he recognized that it alone was capable of curing malaria, and that the common practice



of bleeding and purging were unnecessary and harmful in this prevalent disease.

In 1830, he took in a younger physician, George Penn, as an associate. George Penn, incidentally, was later one of a committee of three who played an important role in the formation of the Missouri State Medical Association.

Sappington was able to convince a few of his fellow physicians that quinine was all that was needed to cure malaria. However, the depletists



THEORY AND TREATMENT

OF

FEVERS,

BY

DR. JOHN SAPPINGTON,

SALINE COUNTY, MISSOURI.

REVISED AND CORRECTED

BY FERDINANDO STITH, M.D.,

FRANKLIN, TENNESSEE.

A Paul may plant, an Apollos may water, but the increase is of God.—First Epist. Paul to the Cor., Chap. 3d, 6th verse.

ARROW ROCK:

PUBLISHED BY THE AUTHOR.

1841.

still dominated the field, much to the detriment of a suffering humanity. There was no local or state medical society to use as a forum for his views, and the columns of the "Western Journal of Medical and Physical Sciences" (1827-1838) with Daniel Drake as an editor, were closed to him.

In 1832, Sappington began the wholesale manufacture of "Dr. John Sappington's Antifever Pills." These were offered to physicians and the public. A considerable number of physicians were induced to use them. In the Sappington correspondence are a number of laudatory letters from

See "What Is Your Hobby, Doctor?" page 906.

physicians. One, from a Dr. Shelton, marvels that he "was able to cure three hundred cases of intermittent fever with his pills without once resorting to the lancet."

Sappington freely and openly to all inquirers stressed that the sole active ingredient of his pills was quinine. His pills became widely (over one million boxes) used in the Western and Southern states. Eyes were being opened and many physicians were laying aside the lancet and using less of calomel and blue mass, but the Antiphlogistics were still far from routed.

Some time in the 1830's, Dr. Sappington began to write his book, published in 1844. He devoted much time to this book, several manuscripts (parts of which survive) being prepared before the final one. In this book, he refutes the Antiphlogistics by reasoned arguments. He gives in detail the formula of his pills, then in wide use, stressing that their sole efficacy is in their quinine content.

It was natural that the distribution of the pills would arouse the enmity of many physicians. Foremost among these was Daniel Drake. Drake's acquaintance with Sappington must have been a long one, for both received a medical degree from the University of Pennsylvania in 1815. Drake, as Editor of the influential "Western Journal of Medical Sciences," and a strong proponent of the Antiphlogistics, refused to open the columns of his Journal to Sappington. Drake, who, during the cholera epidemic in Cincinnati in 1832 widely circulated a bold manifesto of "Health Rules for the Public," advising that the public be bled, (presumably by Dr. Drake) as a prophylactic measure, was hardly in a position to criticize Sappington. Finally, in 1850, Drake was forced to admit that "some respectable physicians" as those at the head of Charity Hospital in New Orleans, "were successfully treating malaria with quinine alone, without the use of calomel (Drake recommended an initial dose of 20 grains) and the lancet."

A professor of one of the early St. Louis Medical Schools (and a critic of Dr. Sappington) became ill with a fever, and naturally submitted to the depletive method of treatment, of which he was an advocate. In spite of repeated rounds of calomel and the free use of the lancet, the patient's condition deteriorated until it became evident that his survival was questionable. In this desperate situation it was decided to call in Dr. Sappington. Sappington magnanimously came and, under his drastically different treatment, the patient recovered, and a critic became a friend and a supporter.

Time and experience were teaching many physicians that Sappington was right and justified in his unusual method for hastening the introduction of quinine. Among the more prominent of his defenders was Dr. E. H. Gregory, President of the Missouri State Medical Association (1884) and in 1886 President of A.M.A.

In 1853, Sappington founded with $20,000 (over half of his personal property) the Sappington School Fund. This fund, now increased to $86,000, has aided 12,828 students of Saline County in securing an education. Appropriately, among this large group have been a considerable number of physicians.

While of course not alone in his opposition to the dominant Antiphlogistic School, Sappington was unique in that he, a physician of the Missouri Frontier, was well forward in the vanguard, and delivered sledge hammer and telling blows against their armor with all the powers at his command. His career reminds one of that of his friend Andrew Jackson, implacable foe of all that would halt the territorial expansion of the United States.

John Sappington's inclusion in the "Dictionary of American Biography" is a merited one.

His epitaph, "He lay like a warrior taking his rest," is a fitting one for this unusual physician.

Maximum Inefficiency

Today, the busy doctor is in a peculiarly vulnerable and troubled spot. He is in the middle of a hollow square of difficulties—a modern Pandora's box—because of an insufficient number of hours in the day.

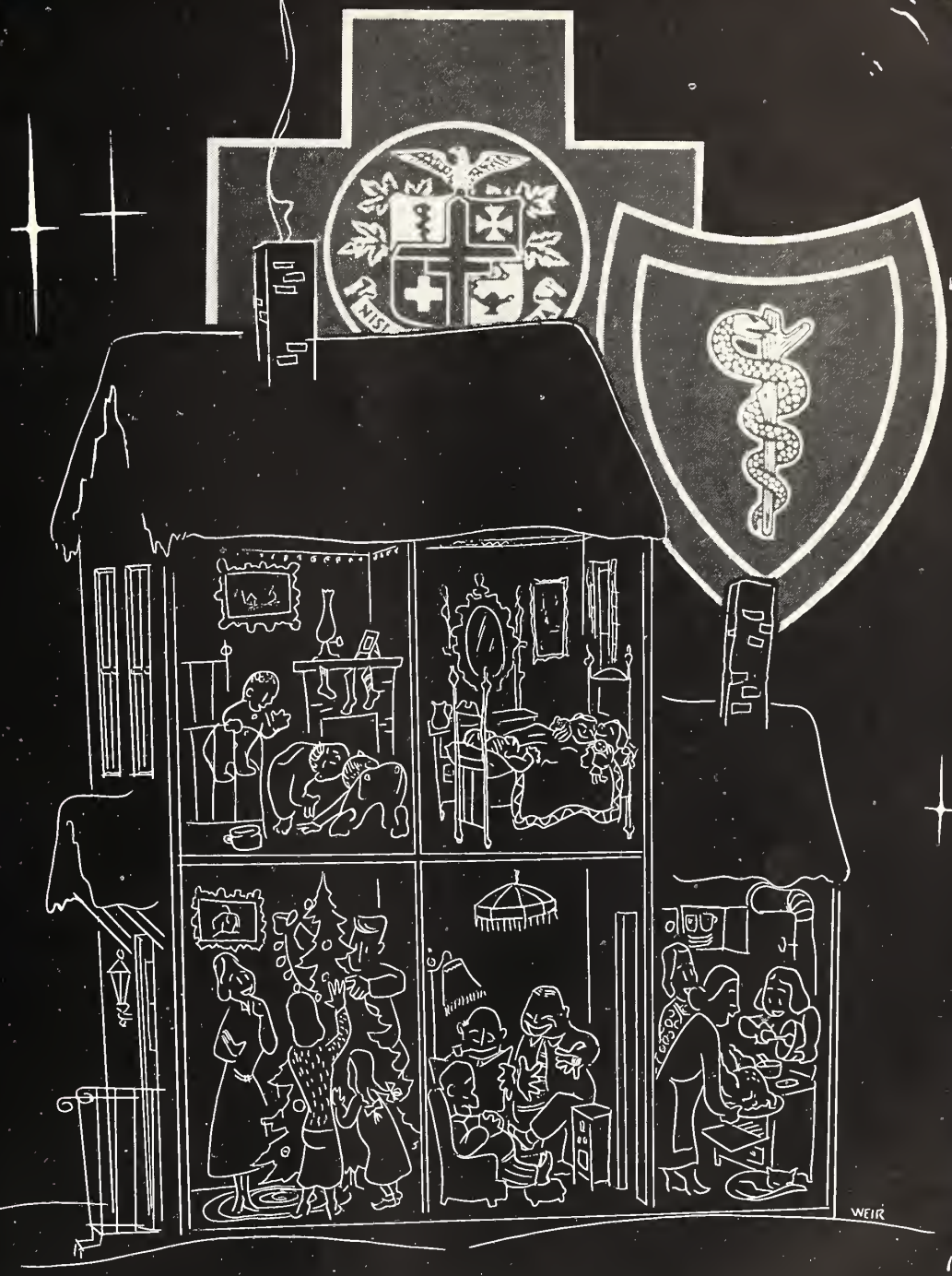
In the morning's mail, at one swoop, with the waiting room full, he is faced with several insurance forms plus a request for a report or two by a lawyer concerning the injuries of a patient.

Before we are much older, we may have to turn our practices, our policies, our routines, and our office hours into bedlam in order to keep in step with the rapidly changing times. True, health insurance policies are a vital need . . . but why do some insurance companies insist on having forms which are disorganized and wrong-side-out in the matter of being understandable.

. . . some samples . . . a form which requests the diagnosis, a description of the objective findings (one line of space) and then the question, "Why was the patient sent to the hospital?" . . . my reaction is to answer, "Because he was sick." It is my impression that an insurance form is being filled out for a purpose. It should convey information from the doctor to the company and shouldn't be a mental merry-go-round.

. . . I have yet to receive a satisfactory explanation as to why a lawyer needs a complete medical report before the patient has recovered, then allows the case to rest until the following term of court and all of a sudden decides that he should have an up-to-date report.

. . . I personally would say there are two main central sins to be observed in this daily waste of time: (1) The Insurance Companies should revise their forms and make them as simple and uniform as possible. (2) Lawyers should consider that the practice of medicine is a one-man's business and that many times medical reports must be completed at inconvenient hours.—*News and Views,* St. Louis Academy of General Practice.



ON THE NIGHT BEFORE CHRISTMAS . . .

BLUE CROSS
BLUE SHIELD
Non-profit
hospital-medical-surgical plans
sponsored by doctors

Saint Louis Kansas City

AND all through the year, may you find happiness . . . success . . . good health . . . and the peace of mind that comes with freedom from worry.

Every man owes a part of his time and his money to the profession in which he is engaged.—THEODORE ROOSEVELT.

Among Ourselves

(Editorially Speaking)

Jerome I. Simon, M.D.
Contributing Editor
F. T. H'Doubler, M.D.
Contributing Editor
Helen Penn
Assistant Editor and Business Manager
Vincent T. Williams, M.D.
Editor

COMMITTEE ON PUBLICATION

Vincent T. Williams, M.D., Chairman
Raymond O. Muether, M.D.
John P. Ferguson, M.D.
M. D. Overholser, M.D.
Paul O. Hagemann, M.D.

"Our Thanks"

This is the twelfth copy of MISSOURI MEDICINE, produced by the present editorial "team"; it is the last copy of the current volume. The Executive Council, at their September meeting, decided to keep the same staff for 1954. And, since this is the Christmas season, we believe it is apropos to thank everyone who has helped us during the last year.

Our editorial contributors (each of you has his favorite) have sent in their assigned material punctually. Our readers, both in person and by letter, have accepted and approved their efforts. We have received several hundred letters and more personal messages from our readers, which prove that MISSOURI MEDICINE is being read. There have been few criticisms, mostly constructive.

The above is not written in a smug or complacent vein; we will try to do better in 1954. The basis for such improvement must remain with an alert reader-audience, ready to pounce on our mistakes and willing to cooperate by forwarding newsworthy items about our members, together with their opinions and ideas about our JOURNAL. We wish to thank those who have written us during the last year; we hope many more will do the same in the future.

The rough spots in producing the JOURNAL this year have been challenges, fun. All of our ideas did not work out as well as we anticipated. With the help of so many friends we hope the future will see some of these plans materialize.

No message of thanks would be complete if it omitted our associate, William B. McCunniff, and our secretary, Miss Joan Maas. Without those two, this writer would be lost.

Again, to all those who have contributed, in any way, to our JOURNAL during this year, we say —Thanks very much, a Merry Christmas, and a Happy New Year!

VINCENT T. WILLIAMS, M.D.

Few Doctors Are Law Violators

A UP report from England informs us that Dr. Elizabeth Simpson, seeking to dissolve her partnership with Dr. James Hay because of Dr. Hay's drinking habits, tied him with a dog leash, threatened to tattoo the word "drunkard" on his bald head and hid his clothes to prevent his trips to the tavern.

It seems significant, somehow, that this relatively unimportant bit of scandal should have made the international press cable. We had not thought of it before, but we do not read much of law violations by physicians, and the question seemed to offer an interesting avenue of investigation.

A query addressed to the Chief of Police in St. Louis relative to the number of arrests in the physician group, and the nature of the charges, brought a prompt and courteous reply. The IBM machine in the Records Division sorts out occupations, but not the charges in a specific group. Consequently, we learn that in 1952, in the City of St. Louis, among physicians and surgeons, there were ninety-seven males and two females arrested on various charges. Among the males, the lowest number in any one month was four (in September and October); the highest, eighteen, in July. The two arrests in the female category were one each in February and July.

Further inquiry into the nature of the charges brought the reply, "You may assume that many of the arrests were for traffic violations." And this was as far as the break-down was permitted to go.

Therefore, for those of you whose curiosity is unrequited by this report, we shall never know how many St. Louis doctors were arrested in 1952 for rape, arson, murder or safecracking. However, it's good to know that the police won't tell!

JEROME I. SIMON, M.D.

Merry Christmas

Our good friend and editor, Ted Williams, wrote us our monthly reminder for our tiny editorial. The reminder this month happened to say that the editorial would be for the December number—two months hence—and the mere mention of December naturally brought up the thought of the Christmas season. If Christmas is to be included editorially it will have to be now in an editorial turned in on October 15.

At first this seemed out of season—until we were happily involved in the Community Chest Drive. Then Christmas seemed to be really at hand even though more than two months away. The response of the medical profession to the past Community Chest drives is something of which we can be proud. It has shown the world how we stand. During the coming Yuletide season we can sit back and enjoy our blessings and enjoy also thinking how our and other contributions are making for happiness.

So we take this occasion to jump the gun and wish all our readers a very Merry Christmas and a Happy New Year.

F.T. H'Doubler, M.D.

Modern Day Anesthesiology

The art of anesthesia began a century ago with the discovery of the anesthetic properties of nitrous oxid, ether and chloroform. A second phase of anesthesia began a half century ago when regional and local anesthetic agents, especially cocaine and procaine were discovered and utilized. A third phase began twenty years ago when cyclopropane, Vinethene and Pentothal were announced. The armamentarium of drugs used today to produce anesthesia was virtually complete.

The present phase began a decade ago. The increase in technics, the knowledge of what actually occurs in anesthesia, and the growth of the specialty of anesthesiology are dependent on several factors. The surgical needs of the poor risk patient and prolonged operations develops safer methods. The occasional needs for a nonexplosive method, a hypotensive method or of intrathoracic cardiovascular procedures require development or refinement of technics. The intensive study of physiology as related to the anesthetized patient has been the major reason in making a science as well as an art of anesthesia. Many more physicians now practice full or part time anesthesia. They have improved anesthetic procedures and combined them with the newer drugs to produce a safer, pleasanter and more adequate anesthetic for the patient. They use several new drugs. Some are anesthetizing, most are adjuvants.

Trichlorethylene is a weak, nonexplosive general anesthetic agent now available in a purified form, and has wide usage for office and minor hospital procedures and obstretics. It is safe, pleasant, short acting and requires little equipment.

The most used adjuvant in general anesthesia is a relaxing drug. Curare was the first of these and is usually given as d-tubocurarine chloride. It produces relaxation of any degree and lasts several minutes. A potent antidote for overdosage is available (Tensilon). Succinylcholine chloride is another effective and widely used relaxing agent. It is short acting and therefore valuable in brief procedures. For longer procedures it is usually given as a continuous drip.

The hypotensive drugs have a limited but helpful scope. The use of Arfonad or hexamethonium can produce a transient bloodless surgical field.

Continuous drip intravenous procaine is one of the drugs useful in correction and prevention of certain cardiac arrhythmias.

Nalline is a useful antidote for narcotic overdosages.

When hypotension is not due to blood loss, and in many nonsurgical indications, nor-epinephrine given as a regulated drip may be useful in maintenance of an adequate blood pressure.

Spinal anesthesia is widely used, with Pontocaine as the commonest agent, and is usually supplemented with a barbiturate amnesia (intravenous Nembutal or Seconol, drip Pentothal or Surital).

Hypothermic technic is occasionally used in general anesthesia. The body temperature is lowered several degrees and the lowered metabolic requirements aid safer conduct of the procedure.

Endotracheal anesthesia commendably forms an appreciable proportion of general anesthetics.

A common general anesthetic is the "balanced anesthetic" of a short acting barbiturate, as Pentothal for easy induction and continuous amnesia, plus an inhaled gas as nitrous oxid or cyclopropane for anesthesia, usually using an endotracheal tube, plus a relaxing agent as curare or succinylcholine. This combination produces a state in which a patient is under fairly light anesthesia, but has adequate relaxation and quietness of the surgical field. No one of the drugs is given in the upper limits of its safety.

With the help of the physiologists, the availability of new drugs and the knowledge of new technics, the present day man at the head of the table can give a safer, pleasanter and more adequate anesthetic.

S. Ross Melgaard, M.D.

Fraternally Yours

"But Once a Year"

Whether one meditates on the human race in general, or considers the medical profession in particular, it seems a shame that the spirit of "the night before Christmas" can't be with us 365 days a year. And, there is no real good reason why we couldn't have things like this if everybody would just try a little harder.

Of course, physicians are human and, as such, on occasion they reveal the weaker, baser aspects of human animals. At least, most of us do. We hear about selfishness, jealousy and meanness of other varieties. Doubtless, there are gougers, crooks and other scalawags in our ranks. Yes, almost every human frailty is manifested by some of our colleagues at one time or another.

But, there is a better side to our profession. What other profession has worked more diligently to eliminate disease, and hence, to hurt its own pocketbook? Or, one might say, what other profession works harder to eliminate the very reason for its existence? Wouldn't almost every one of us give his life to know how to prevent cancer, heart disease, high blood pressure and many other of these diseases which we are most often called upon to treat? What other profession contributes more of its time, of its mental and physical resources in works of charity?

As the gap between genius and insanity may be narrow, so is the difference in the conflicting personalities of the physician. To some patients, he is remote, inaccessible, aloof, cold; to others he is quite the opposite—friend, confidante. By some, he may be described as exorbitant in his charges; other patients find him reasonable in adjusting real or fancied grievances.

One might go through the whole gamut of damnable charges against physicians (or other humans), and find these strikingly contrasting characteristics. Like life in general, physicians are not all white, nor all black—usually their lives are a neutral gray. Maybe, at some future time, they will average out a little lighter, a little less gray, like they are on Christmas Day.

In connection with Christmas thoughts, we like the following from our fellow-Missourian, General Omar N. Bradley:

"We have too many men of science, too few men of God. We have grasped the mystery of the atom, and rejected the Sermon on the Mount . . . The World has achieved brilliance without wisdom, power without conscience. Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living."

It seems incredible that in nineteen hundred and fifty-three years, with the precept of Him, Whose Birthday we now celebrate, so little has really been accomplished in changing or modifying human nature. The thrilling story of Christ is a source of wonder and delight to millions of men in each generation. And, yet, His lesson goes unheeded by many more millions of each successive generation.

At present, there are millions who deny a Supreme Being; their training and their teaching is a denial of any power other than brute force and materialism. It would seem that the prayers and efforts of so many to bring the Word of Christ into a living, everyday philosophy for all the human race, has been a bitter failure.

This gentle philosophy of "do unto others" is the basis of a peaceful, friendly world, wherein all human activity would be devoted to constructive enterprise, not for destruction. The spirit of Christmas is simple, unchanging, ageless. If everyone on earth would adopt its true meaning, every day in the year, then, indeed, we would have "peace on earth." This is the inner hope and prayer of every normal human being of every land.

Idealistic dreaming? Sure, but think of it this way, the world is no more than the people in it. Where should this peace start? Within ourselves; not just on Christmas Day, but 365 days a year!

Or, as Alfred Noyes said in his poem, "God's Gift":

". . . Build us that better world, O, not diminished
By one true splendor that they planned on earth.
And that's not done by sword, or tongue, or pen.
There's but one way. God make us better men."

V. T. W.

Nothing Mysterious

. . . (good public relations consists of) prompt, courteous, efficient service made available 24 hours a day and 365 days a year . . . good public relations is something like making love—you have to participate in it if you expect to get much satisfaction out of it. A.M.A. Public Relations Director Leo Brown, at Kentucky State Medical Association. Reported in *Time*.

Missouri Medical Meetings

Dec. 1-4: American Medical Association Clinical Session, St. Louis.

Component Society Meeting Dates

Audrain County Medical Society—third Thursday of each month.

Barton-Dade County Medical Society—third Wednesday of each month.

Benton County Medical Society—meets only on call.

Boone County Medical Society—first Tuesday of each month.

Buchanan County Medical Society—first Wednesday of each month.

Butler County Medical Society—first Wednesday of each month.

Callaway County Medical Society—third Thursday of each month.

Cape Girardeau County Medical Society—first Monday of each month.

Cass County Medical Society—meets quarterly on third Thursday of month.

Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month September through May.

Clay County Medical Society—last Tuesday of each month.

Clinton County Medical Society—meets only on call.

Cole County Medical Society—first Monday of each month.

Cooper County Medical Society—first Monday after the 15th of each month.

Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.

Dunklin County Medical Society—first Tuesday of each month.

Franklin-Gasconade-Warren County Medical Society—last Tuesday of each month at the St. Francis Hospital, Washington, at 12:30 p. m.

Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb—second Thursday of each month.

Greene County Medical Society—fourth Friday of each month.

Henry County Medical Society—meets only on call.

Holt County Medical Society—meets only on call.

Howard County Medical Society—meets only on call.

Jackson County Medical Society—fourth Tuesday of each month except June, July and August, at auditorium of General Hospital No. 1.

Jasper County Medical Society—second Tuesday of each month, September through May.

Jefferson County Medical Society—meets only on call.

Johnson County Medical Society—meets only on call.

Laclede County Medical Society—first Friday of each month at the Louise Wallace Hospital, Lebanon.

Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p. m., at the Victory Cafe, Lexington.

Lewis-Clark-Scotland County Medical Society—meets only on call.

Marion-Ralls County Medical Society—fourth Tuesday of each month, 7:30 p. m.

Miller County Medical Society—meets only on call.

Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.

Moniteau County Medical Society—second Thursday of each month.

Newton County Medical Society—meets only on call.

Nodaway-Atchison-Gentry-Worth County Medical Society—first Monday in February, April, October and December.

North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.

Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)—second Tuesday of each month September through June.

Pemiscot County Medical Society—third Thursday of each month.

Perry County Medical Society—second Thursday of each month.

Pettis County Medical Society—third Monday each month September through May.

Phelps-Crawford-Dent-Pulaski County Medical Society—fourth Thursday of each month.

Pike County Medical Society—third Tuesday of each month.

Platte County Medical Society—meets only on call.

St. Charles County Medical Society—third Thursday of each month.

St. Louis County Medical Society—second and fourth Wednesday of each month.

St. Louis Medical Society—first, third and fifth Tuesday of each month October through May.

Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month September through May.

South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)—third Wednesday of each month.

Vernon-Cedar County Medical Society—meets only on call.

Webster County Medical Society—meets only on call.

Musings of the Field Secretary

Listening to a small group of doctors discussing commercial exhibits the other night produced much food for thought. Two positions took definite shape in the discussion—one, a medical meeting or convention should have no commercial exhibits and should be financially supported by adequate membership dues or registration fees; second, commercial exhibits should be a part of medical meetings and conventions to present information on pharmaceutical products and medical and surgical equipment to the doctors in attendance and to help defer the expense of the meetings.

It seemed that those holding to the first position might possibly have been influenced in their opinion by a feeling of being a bit high pressured by a small majority of exhibitors at various meetings. These doctors felt they were unduly pressured to register at certain booths and to buy specific products. Apparently they prefer to view exhibits, or not view them, as the mood strikes, with little, if any, solicitation. To them the policy of some companies who exhibit at medical conventions is that of judging the value of the convention upon the number of doctors who register at their respective booths or from the number of orders taken during the session.

The doctors taking the other point of view felt that most exhibitors have helpful information to offer and that commercial exhibitors are engaged in a business and a highly competitive one at that. Physicians are the keys that unlock the distribution doors of the pharmaceutical and medical-surgical equipment business.

These exhibits are facets of advertising, say these doctors, and are budgeted for as a profitable expenditure. Physicians gain information and financial support for their meetings from commercial exhibits while the exhibitors have a chance to see many doctors in a short period of time at one place (without cooling their heels in the waiting room all p.m.).

Does not a good amount of public relations and advertising value accrue to a commercial exhibitor primarily from the display of his name and one or two products at a medical convention?

Members in the News

Guest speaker at the Colorado State Medical Society meeting in Denver, September 29 to October 2, **Claude J. Hunt**, M.D., Kansas City, discussed "Thyroid," and "Cancer of the Stomach." He also attended the American College of Surgeons meeting in Chicago, October 5 to 9; and again spoke on "Cancer of the Stomach" at the Southern Medical Association meeting in Atlanta, October 26.

Dr. and Mrs. **Kenneth C. Hollweg**, Kansas City, suffered minor injuries in an automobile accident October 6.

Among the members of the Jackson County Medical Society who attended the meeting of the Central Neuropsychiatric Association in Indianapolis, October 16 and 17, were **Marvin L. Bills**, M.D., **Paul Hines**, M.D., **Albert Preston, Jr.**, M.D., **G. Wilse Robinson, Jr.**, M.D., **E. H. Trowbridge, Jr.**, M.D., and **Edward C. Weiford**, M.D.

"Allergic Dermatitis in Industry" was discussed by **Thomas B. Hall**, M.D., at the October meeting of the Association of Rock Island Railway Surgeons, held in Kansas City.

Kansas City physicians, **Garrett Pipkin**, M.D., and **Harold V. Zuber**, M.D., attended the meeting of the American Fracture Association at Mission Inn, Riverside, California, in October. Dr. Pipkin presented his film on "Shoulder Arthrodesis" and Dr. Zuber discussed the film. Dr. Pipkin also showed his movie on a successful free tendon graft in a race horse.

Raymond W. Latham, M.D., and **Clark W. Seely**, M.D., Kansas City, attended the meeting of the American Academy of Pediatrics in Miami, Florida, in October, and the meeting of the International Congress of Pediatrics in Havana, Cuba, in October.

Twenty-six MoMedics were awarded fellowships in the American College of Surgeons at the October meeting in Chicago. The new Fellows, part of a group of 1,100 were **John E. Lamy**, M.D., Sedalia, **Thomas G. Otto**, M.D., **Paul G. Wolff**, M.D., Cape Girardeau, **Francis R. Burns**, M.D., Hannibal, **George Aaron**, M.D., **Arthur Adelman**, M.D., **Hector W. Benoit**, M.D., **Joseph S. Cope**, M.D., **Robert W. Forsythe**, M.D., **H. Kermit Knock**, M.D., **Terry E. Lilly, Jr.**, M.D., **Paul W. Meyer**, M.D., **William C. Mixson**, M.D., **Thomas G. Orr, Jr.**, M.D., **Berneil W. Andrews**, M.D., all of Kansas City, and Springfield physicians **Thomas E. Ashley**, M.D., and **Horace A. Lowe, Jr.**, M.D. From St. Louis the new Fellows are **Morris Abrams**, M.D., **Scott R. Barrett**, M.D., **Virgil O. Fish**, M.D., **Harry N. Glick**, M.D., **C. Barger Mueller**, M.D., **Richard T. Odell**, M.D., **Robert E. Ryan**, M.D., **George J. L. Wulff, Jr.**, M.D., **Wilbur H. Lewin**, M.D., the last-named from Kirkwood.

Charles C. Dennie, M.D., Kansas City, was a guest speaker at the Oklahoma City Clinical Society Conference late in October.

Dr. and Mrs. **Edward H. Hashinger** have returned to Kansas City after a ten-week vacation in Europe and North Africa.

A special series of lectures on rehabilitation for nurses at Firmin Desloge Hospital is being conducted by Dr. **Otaker Machek**, St. Louis. Dr. Machek came to the U. S. in 1947 and has spent four years studying rehabilitation at NYU under Dr. Howard Rusk.

Members participating in the Missouri Conference for the Improvement of Patient Care held in Jefferson City late in October included Executive Secretary **T. R. O'Brien**, **Hollis Allen**, M.D., **David Littauer**, M.D., **James R. Amos**, M.D., and **Paul N. Johnstone**, M.D.

"Trends Influencing Medical Education" was the topic of the talk given by **Roscoe Pullen**, M.D., Columbia, at the Buchanan County Medical Society Meeting. A discussion on Blue Cross and Blue Shield policies and plans was also conducted at the same meeting by **F. L. Feierabend**, M.D., Kansas City, President of Blue Shield.

From Laredo, Texas, **Herbert L. Warres**, M.D., urologist, is the newest addition to the Thompson-Brumm-Knepper Clinic, St. Joseph.

The newest addition to the "lighter medical literature" is the third in a series of animal photographs with common hospital captions, "Ethicon Infirmary," published by the Ethicon Suture Laboratories.

After anonymous donors placed $100,000 in escrow for use in enlarging the Boone County Hospital, a campaign was started to collect one half that amount from local citizens. If this latter amount is collected, the $100,000 will be available for a three story, forty-eight bed wing. In the last six years, two $500,000 bond elections have been approved by Boone County voters, but not by the required majority.

A survey of medical services in Greater Kansas City conducted early in the fall by Community Studies, Inc., revealed a current bed capacity of 4,962 of which 3,006 were in private hospitals, 1,956 in government and public hospitals. Expansions and new constructions now planned would increase that number by more than a thousand beds. The study indicated a need for 2,747 non-indigent and 1,470 indigent beds now. Also brought out was the fact that nearly 1/5 the total days of hospital care in sixteen

major hospitals were for out-state patients. There was a 17.6 per cent decrease in the average length of stay in hospitals since 1940, resulting in an increase of 64.8 per cent increase in admissions. It was also noted by the plan that 76 per cent of the Kansas City residents were covered by hospital insurance plans.

Recently elected Director of the American Board of Anesthesiology is **Milton C. Peterson**, M.D., Kansas City.

Also recently voted into office as President-elect of the Southwest Surgical Congress was **Lawrence P. Engel**, M.D., Kansas City, **John H. Mayer, Jr.**, M.D., also of Kansas City, was elected Councilor for Missouri at the meeting in Salt Lake City.

Individual winners for exhibits at the Kansas City Southwest Clinical Society session were: First, "Examination of the Bleeding Colon," **Everett R. Deweese**, M.D., and **William M. Kitchen**, M.D.; second: "Oral Lesions," "**Charles K. Shofstall**, M.D., **William H. Shofstall**, M.D., **G. Farrell Webb**, D.D.S., and **Frank E. Klee**; third, "The Earlier Diagnosis of Cervical Carcinoma," **J. Milton Singleton**, M.D., and **Ferdinand C. Helwig**, M.D. All winners were from the greater Kansas City area. The Committtee on Alcoholism of the Jackson County Medical Society was awarded second prize in the group exhibits with their presentation of "Alcoholism."

Winner of the 1948 Merit Award for outstanding service to the American Academy of Ophthalmology and Otolaryngology, **John L. Myers**, M.D., who retired from practice in Kansas City this year, has left Missouri for an extended vacation in Alaska, after which he will take up residence in the West.

The Psychiatric Receiving Center on Kansas City's Hospital Hill was dedicated October 16. The dedication address was given by Secretary of Health, Education and Welfare, the Hon. Oveta Culp Hobby.

Flight surgeon **Bert W. Harned**, M.D., Kansas City, interrupted his trip on a B-17 flight from Newfoundland, for a visit with his parents.

Martin Feeney Engman, M.D., who died in Ladue in October, was a founder of the Carville National Leper home, former chairman of the board of the Barnard Skin and Cancer Hospital, and was at one time Clinical Professor of Dermatology at Washington University.

St. Louis County Medical Society President, **Guy N. Magness**, M.D., represented Missouri at the Fourth National Conference on Physicians and Schools; later in the fall he was a participant in the Conference on Better Health for Oklahoma School Children.

A $7,400 grant by the U.S.P.H.S. for research in diabetes has been awarded to **Charles G. Zubrod**, St. Louis University.

A busy month for MoMedic **Robert M. Hazen**, M.D., Kansas City, who closed his office, was certified by the American Board of Otolaryngology, reported to Ft. Sam Houston for active duty with the Army.

Attendants at the Minneapolis meeting of the Mississippi Valley Trudeau Society heard discussions by St. Louis physicians **C. Rollins Hanlon**, M.D., **J. Gerard Mudd**, M.D., and **Paul Murphy**, M.D.

At the 32nd Annual Meeting of the South Central Section of the American Urological Association, held September 21 to 23, in Kansas City, **John F. Patton**, M.D., formerly of St. Louis, now at Fitzsimmons Hospital, Denver, presided as President. Other officers from Missouri include: **Irwin S. Brown**, M.D., Kansas City, Secretary and Treasurer; **A. Lloyd Stockwell**, M.D., Kansas City, Member of the Executive Committee; **Grayson Carroll**, M.D., St. Louis, Member of the Editorial Board; **R. Lee Hoffman**, M.D., Kansas City, Member of the National Executive Committee. Among those presenting papers were St. Louis physicians **Justin Cordonnier**, M.D., **William Melick**, M.D., **Grayson Carroll**, M.D., **Robert V. Brennan**, M.D., **Carl A. Wattenberg**, M.D., and **Jules Kopp**; M.D., Kansas City physicians **Andrew Mitchell** M.D., and **A. Lloyd Stockwell**; M.D., and **James C. Cope**, M.D., Columbia, and **Edwin M. Powell**, M.D., Springfield. Missouri was represented in the scientific exhibits by **William W. Leifer**, M.D., **George Aaron**, M.D., and **Sidney Rubin**, M.D., all of Kansas City.

Atlanta, Georgia, bore no small resemblance to a Missouri City during the Southern Medical Association meeting in late October. From St. Louis, those participating in the sessions included **Robert Dean Woolsey**, M.D., **Robert E. Ryan**, M.D., **J. Otto Lottes**, M.D., **Lloyd J. Hill**, M.D., **Stanley M. Leydig**, M.D., **Albert Key**, M.D., **Leland B. Alford**, M.D., **Martin F. Engman**, M.D., **Edward H. Reinhard**, M.D., **G. V. Stryker**, M.D., **Sedgwick Mead**, M.D., **Richard T. Odell**, M.D., **Earl P. Holt**, M.D., **Oscar P. Hampton, Jr.**, M.D., **Fred C. Reynolds**, M.D., **William H. Vogt, Jr.**, M.D., **H. A. Ritter**, M.D., **William F. Melick**, M.D., and **French K. Hansel**, M.D. Also taking part in the discussions, or presenting exhibits were **Robert C. Haynes**, M.D., Marshall, **Hal E. Freeman**, M.D., Springfield, and from Kansas City, **Laurence F. Steffen**, M.D., **Claude J. Hunt**, M.D., **Mark M. Marks**, M.D., and **Albert N. Lemoine, Jr.**, M.D.

Still in active practice in the same town where he opened his practice over fifty-four years ago, **James B. Graham**, M.D., Jameson, observed his 79th birthday late in October.

Presided over by **George E. Sanders**, M.D., the Clay County Medical Society held their annual Clinical Conference in Excelsior Springs early in November. Speakers included **W. A. Sodeman**, M.D., Professor of Medicine at Missouri University, **Russell D. Shelden**, M.D., Kansas City anesthesiologist, and St. Louis allergist and Director of the Hansel Foundation, **French K. Hansel**, M.D.

The Marine Hospital facilities in Kirkwood have been awarded to the Sisters of St. Joseph of Carondolet at a 100 per cent discount, effective November 1. The order, who now operate St. Joseph Hospital, Kansas City, will take charge of fourteen acres and ten buildings with almost 120,000 square feet of floor space, appraised at nearly two million dollars.

A.M.A. Director of the Bureau of Medical Economic Research, **Frank G. Dickinson**, Ph.D., spoke on "Retirement Problems of Physicians" at the regular Jackson County meeting late in October. The meeting, held at the Hotel President, was open to the members and their wives or husbands.

The University of Kansas School of Medicine is presenting a refresher course in "Medical Technology," January 11 to 13, at the University of Kansas Medical Center, Kansas City, Kansas. The course consists of lectures, discussions and demonstrations covering a wide variety of subjects of interest to technologists. Enrollment fee is $12.00.

William G. Becke, M.D., St. Louis, has been named president of the Doctor's Medical Foundation, succeeding Jerome I. Simon, M.D., St. Louis.

The Mid-Continent Psychiatric Association, branch district society of the American Psychiatric Association for the states of Arkansas, Kansas, Missouri and Oklahoma, met in Kansas City on September 26 and 27. The following officers were elected: C. J. Kurth, M.D., Wichita, Kansas; vice president and president-elect, **Paul Hines**, M.D., Kansas City; secretary-treasurer, Frank F. Merker, M.D., Topeka. **G. Wilse Robinson, Jr.**, M.D., Kansas City, was elected councilor for Missouri.

G. P. Control of Specialties

In a community such as ours the specialty practices survive only at the discretion of the general practitioner who controls, and rightly so, a great bulk of the sum and total of the referred work. No one is more aware of this dependence than the specialist himself and it is self evident that his primary objective is to maintain a perpetual pleasant, ethical association between himself and his referring doctors.—Dave Seabaugh, M.D., *Cape Girardeau Medical Bulletin.*

Welcome Proposal

. . . The St. Joseph's Hospital, or Sisters' Hospital as it is referred to, has served our city's sick needs well. But buildings like people get old. Rather than spend a fortune trying to revamp the old structure how much better it would be to construct an entirely new modern hospital with ample parking space adjacent. The medical profession responded enthusiastically to the proposal. We hope to hear more definite announcements from the religious order that operates the hospital, the Daughters of Charity of St. Vincent de Paul.—Editorial, *St. Joseph News-Press.*

Research Clinic

107 West Linwood Boulevard **Jefferson 5353** **Kansas City 2, Missouri**

- **Fifty physicians representing all specialties**
- **Every modern diagnostic laboratory aid**
- **All reports returned to referring physician**
- **Moderate fees for complete diagnostic survey**

Physicians invited to visit or write for information

WARREN F. WILHELM, M.D. **MEDICAL DIRECTOR**

Doctor, would it be helpful to you in your practice to know that there is a food available at reasonable prices in the stores the year round having these attributes:

1. High public acceptance as to flavor and palatability—billions eaten annually.

2. One of the best of the "protective" foods with a well-rounded supply of vitamins and minerals.

3. Low sodium—very little fat—no cholesterol.

4. Sealed by nature in a dust-proof package.

5. One of the first solid foods fed babies.

6. Can be easily digested by old folks as well as infants.

7. Can be readily eaten out of hand, in milk shakes, on cereals, or in salads.

8. Can be baked, broiled or fried.

9. Can be used as an ingredient product in breads, pies, cakes and desserts.

10. Useful in bland and low-residue diets.

11. Mildly laxative.

12. May be used in the management of both diarrhea and constipation.

13. Can be used in reducing diets.

14. Can be used in high-calorie diets.

15. Useful in the dietary management of celiac disease.

16. Useful in the dietary management of idiopathic non-tropical sprue.

17. Useful in the management of diabetic diets.

18. Valuable in many allergy diets.

19. Belongs among foods useful in certain acute intestinal infections.

20. A protein sparer.

21. Favorably influences mineral retention.

22. Useful in the management of ulcer diets.

23. One of the easiest foods to eat or prepare.

FOR THE NAME OF THIS FOOD, PLEASE TURN THE PAGE

The answer is

B A N A N A S

If you would like

1. The authority for any of the statements made on the preceding page . . .

2. Additional information in connection with any of them...

3. The composition of the banana . . .

4. The nutritional story of the banana . . .

5. Information on various ways to prepare or serve bananas.

Please feel free to write to

Director, Chemical and Nutrition Research, United Fruit Company

PIER 3, NORTH RIVER, NEW YORK 6, N. Y.

IN MEMORIAM

Farthing, Robert R., M.D., Ozark, a graduate of the St. Louis College of Physicians and Surgeons, 1901; member of the Ozarks County Medical Society; aged 79; died September 24.

Keeling, Irene C., M.D., Kansas City, a graduate of the University of Kansas School of Medicine, 1929; member of the Jackson County Medical Society; aged 54; died September 29.

Engman, Martin F., Sr., M.D., St. Louis a graduate of New York University Medical College, 1891; honor member of the St. Louis Medical Society; aged 84; died October 12.

NEW MEMBERS

Chinburg, Kenneth, M. D., Springfield
Cunningham, Darral D., M.D., Springfield
Dillard, Erin M., M.D., Springfield
Francis, William C., M.D., Springfield
Magill, Joseph S., M.D., Milan
Morrison, G. B., M.D., Nevada
Pifer, Lawrence H., M.D., St. Joseph
Reed, Edsel S., M.D., St. Joseph
Saper, Philip, M.D., Lee's Summit
Thomasson, David D., M.D., Springfield
Wise, Gordon F., M.D., Springfield
Zahrt, Frank H., M.D., St. Joseph
Zich, Walter J., M.D., Smithville

Cook County Graduate School of Medicine

Postgraduate Courses

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting January 18, February 1, February 15, 1954
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting March 1, 1954
Surgical Anatomy & Clinical Surgery, Two Weeks, starting March 15, 1954
General Surgery, Two Weeks, starting April 26, 1954
Surgery of Colon & Rectum, One Week, starting March 1, 1954
Fractures & Traumatic Surgery, Two Weeks, starting March 1, 1954

GYNECOLOGY—Intensive Course, Two Weeks, starting February 15, 1954
Vaginal Approach to Pelvic Surgery, One Week, starting March 1, 1954

OBSTETRICS—Intensive Course, Two Weeks, starting March 1, 1954

MEDICINE—Electrocardiography & Heart Disease, Two Weeks, starting March 15, 1954
Gastroscopy, Two Weeks, starting March 8, 1954
Two-Week Intensive Course starting May 3, 1954

DIAGNOSTIC X-RAY—Clinical Course every week by appointment

CYSTOSCOPY—Ten-day practical course starting every two weeks

UROLOGY—Two Week Intensive Course starting April 19, 1954

Teaching Faculty—Attending Staff, Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Councilor District News

FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR

Grand River Medical Society

The Grand River Medical Society and its Woman's Auxiliary held a dinner meeting at Fraley's Sales Pavilion Cafe at Chillicothe on Thursday night, October 8.

The scientific program of the evening was presented

Meeting of September 10.

under the auspices of the Missouri Academy of General Practice. Dr. **Stoughton F. White** of Kansas City, discussed "Surgical Indications in Genito-Urinary Diseases." This discussion was well illustrated through the use of x-ray films and slides.

E. A. Duffy, M.D., *Secretary*

SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Marion-Ralls-Shelby Counties Medical Society

The Marion-Ralls-Shelby Counties Medical Society held a dinner meeting at the Mark Twain Hotel, Hannibal, on Tuesday night, October 20.

Meeting of September 22.

The program for the evening was furnished by the Missouri Academy of General Practice with **A. W. Neilson**, M.D., St. Louis, speaking on "Diagnosis and Treatment of Common Skin Diseases," and **Oscar P. Hampton, Jr.**, M.D., St. Louis, discussing "Principles in the Management of Open Wounds of the Hand." Twenty-five physicians were in attendance.

R. J. Lanning, M.D., *Secretary*

NINTH COUNCILOR DISTRICT

J. H. SUMMERS, LEBANON, COUNCILOR

Phelps-Crawford-Dent-Pulaski-Maries Counties Medical Society

Seymour M. Monat, M.D., Instructor in Clinical Obstetrics and Gynecology, Washington University School of Medicine, St. Louis, spoke before the Phelps-Crawford-Dent-Pulaski-Maries Society in Rolla, on Thursday night, October 22. His subject was "Indications for Common Gynecological Procedures." The occasion was a dinner meeting of the Society which was graced as usual by the presence of the doctors' wives.

M. K. Underwood, M.D., *Secretary*

South Central Counties Medical Society

The South Central Counties Medical Society met for dinner at the City View Cafe in Mountain Grove, Thursday night, October 22, with the following members and visitors present: Drs. **R. W. Denney, H. G. Frame, S. W. Connor** and **A. C. Ames**, Mountain Grove; **J. B. Kelley**, Houston; **M. B. Perkins**, Willow Springs; **Rollin H. Smith**, West Plains; **C. W. Cooper**, Thayer, and **Stanley Peterson** and **Frank Sundstrom**, Springfield, and several of the wives.

After dinner the ladies went home with Mrs. Denney for the evening and the doctors went to Dr. Connor's office where the meeting came to order for the program and was turned over to the visitors from Springfield. Dr. Peterson spoke on "Anemia" and especially on splenic anemia and Dr. Sundstrom spoke on "Herniated Discs in the Lumbar Spine." Both brought out enough new to make the discussion profitable to all.

The minutes of the meeting were read and approved.

Dr. **J. B. Kelley**, Houston, was elected to membership without payment of dues for 1953.

The meeting adjourned to meet at Cabool on November 18.

A. C. Ames, M.D., *Secretary*

TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Dunklin, Pemiscot and Butler-Ripley-Wayne Counties Medical Societies

A joint dinner meeting of the Dunklin, Pemiscot and Butler-Ripley-Wayne Counties Medical Societies was held on Tuesday night, October 6, at the Cotton Boll Hotel in Kennett, under the auspices of the Missouri Academy of General Practice.

They all like

pediatric

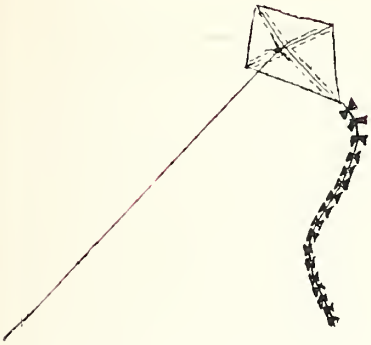
ERYTHROCIN

TRADE MARK

STEARATE

(Erythromycin Stearate, Abbott)

oral suspension



. . . the cocci-killing antibiotic for children of all ages. Tasty, stable, ready for instant use. *No mixing required*—drug retains potency for at least 18 months.

Winter infections—otitis media, bronchitis, sinusitis, pharyngitis and pneumonia—are especially sensitive to *Pediatric* ERYTHROCIN. Also, pyoderma, erysipelas, certain cases of osteomyelitis, and other infectious conditions.

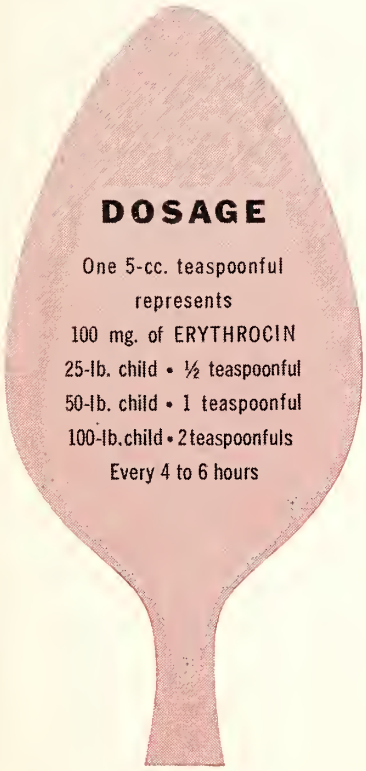
Many physicians make it a practice to always prescribe *Pediatric* ERYTHROCIN when the organism is staphylococcus, because of the high incidence of staphylococcic resistance to many other antibiotics. And when the organism is resistant or when the patient is sensitive to penicillin and other antibiotics.

Pediatric ERYTHROCIN is specific in action—*less likely to alter normal intestinal flora than most other antibiotics.* Gastrointestinal disturbances are rare. No serious side effects reported.

Pediatric ERYTHROCIN can be administered before, after or with meals. Available in 2-fluidounce, pour-lip bottles.
Your little patients will like *Pediatric* ERYTHROCIN.

Abbott

1-291



Dr. **Michael M. Karl**, Assistant Professor of Clinical Medicine, Washington University Medical School of St. Louis, presented an interesting and informative program on "Recent Advances in the Diagnosis and Treatment of Liver Disease."

E. L. SPENCE, M.D., *Secretary,*
Dunklin County Medical Society

Meeting of November 4

On Wednesday night, November 4, another joint dinner meeting of the Butler-Ripley-Wayne, Dunklin and Pemiscot Counties was held at the Veterans Administration Hospital in Poplar Bluff. Following dinner the group was directed on a tour through the hospital.

To open the evening program, Dr. **E. Claude Bohrer**, West Plains, President of the Missouri State Medical Association, presented a charter to the recently hyphenated Butler-Ripley-Wayne County Medical Society. The scientific part of the program was then presented by Dr. **Thomas H. Burford**, St. Louis, and Dr. **Robert J. Mueller**, St. Louis. Dr. Burford discussed "Lung Abscesses" and Dr. Mueller spoke on "The Psychoneuroses in General Practice and their Management." Approximately twenty doctors attended this full evening of interesting medical society activities.

Dr. Bohrer presents Charter

ROBERT ENGELHARDT, M.D., *Secretary,*
Butler-Ripley-Wayne Counties Medical Society

Southeast Missouri Chapter of Missouri Academy of General Practice

On Thursday night, October 8, the Southeast Missouri Chapter of the Missouri Academy of General Practice in conjunction with the Southeast Missouri Medical Society held a postgraduate medical education dinner meeting at the Marquette Hotel in Cape Girardeau.

The program for the evening was furnished by St. Louis University Medical School in the form of a panel discussion by Drs. **Max Franklin, C. G. Vournas** and **Charles Kromer** on the subject "Newer Drugs in the Management of Hypertension." Twenty-one physicians were present to hear this interesting discussion.

Meeting of October 8.

J. H. TROLINGER, M.D., *Secretary,*
Southeast Missouri Chapter of the Missouri
Academy of General Practice

M.S.M.A. Host to A.M.A. Interim Session

Have you made your plans to attend the seventh annual Clinical Session of the American Medical Association in St. Louis, December 1 to 4? More than 3,500 physicians will be there.

Arrangements assure the general practitioner one of the most educational gatherings since the inception of the Clinical Sessions in 1948. With more than 150 papers by outstanding physicians, a Scientific Exhibit of about 80 displays, a Technical Exposition of about 160 exhibits, a motion picture program and a color television schedule, every important problem in every day practice will be covered thoroughly. The scientific activities will be presented in Kiel Auditorium.

On the policy side of the medical profession, those attending the Clinical Session will see the House of Delegates at work. Matters of utmost importance to the general practitioner and to the medical profession as a whole will be discussed. The House will meet in the Jefferson Hotel.

One of the important announcements out of the meeting will be the selection of the General Practitioner of the Year, a coveted honor for services as a family doctor.

Mayor Raymond R. Tucker of St. Louis, Dr. Claude Bohrer, President of the Missouri State Medical Association, and Dr. A. N. Arneson, president of the St. Louis Medical Society, will welcome delegates and members at the opening general session on Tuesday afternoon. They will be followed by a presentation of opportunities for research in general practice.

Other general sessions will be held Wednesday and Thursday afternoons and on Friday morning. Attending physicians will be given an opportunity to stump the experts—a panel composed of an internist, surgeon, pediatrician and obstetrician.

There will be lectures in obstetrics and surgery, a clinical pathologic conference and discussions of

what's new in antibiotics, diseases of the liver, hematology and cardiology.

In the surgery division, a full day will be devoted to the management of wounds and trauma. There will be question and answer periods. Another session on surgery will present new forms of treatment of fractures and of infections of the urinary tract. The relief of intractable pain, various technics in the treatment of advanced cancer and the care of the patient upon the operating table are among other points to be covered.

Morning and afternoon programs will be presented in the internal medicine field. These will cover every important disease which comes to the attention of the general practitioner.

The pediatric division will consider such disease entities as bacterial meningitis, aseptic meningitis, cerebral palsy, subdural hematoma, leukemia and erythroblastosis fetalis. An afternoon will be devoted to the discussion of acute rheumatic fever in childhood. The management of common congenital deformities of the head and neck, and of bleeding tendencies in children, also will be considered.

All forms of treatment of chronic arthritis and recent advances in the diagnosis and treatment of gout will be explained.

There will be four sessions on obstetrics and gynecology. A few of the topics will be: the use of hormones in gynecology, uterine carcinoma, prolonged labor, postpartum complications, pruritis vulvae, toxemia of pregnancy, heart disease in pregnancy, obstetric anesthesia, pregnancy complicated by diabetes or tuberculosis, the Rh factor, pelvic inflammatory diseases, sterility and prenatal care.

Four sessions also will be devoted to cardiovascular diseases. There will be panels on coronary heart disease and angina pectoris, and modern concepts in the management of hypertension. Other subjects to be taken up by that division are: peripheral vascular disease, cardiology, the use of anticoagulants in heart disease, rheumatic fever and rheumatic heart disease, the cyanotic child, the cardiac as a surgical risk, cardiac arrest and the mitral problem.

Pulmonary diseases will occupy attention at two sessions. The present status of the tuberculosis problem and the current forms of treatment of pulmonary tuberculosis will be considered. Lung cancer, pulmonary manifestations in disseminated lupus and sclerosing pneumonitis are among the other topics on the program.

An important division will be neurology and psychiatry. Papers will be presented on strokes, aging patterns in cerebral arteries, brain tumors, thyroid disease, electroencephalograms, spondylolisthesis, anxiety heart disease, mental health, management of the attempted suicide and the psychology of food intake as it relates to underweight and obesity.

Two panels will feature the division on dermatology. One will consider what to do and not to do in dermatology and the other will discuss moles and birthmarks. Among the other presentations will be occupational dermatitis, insect bites, weed poisoning and dermatologic manifestations of hypoproteinemia.

In the gastrointestinal disease division, the role of hormones will be explained. Changes in surgery in carcinoma of the stomach also will be reported. Other topics will include surgical care of ulcerative colitis, early diagnostic procedures in massive gastrointestinal hemorrhages, chronic pancreatitis, gastric surgery and radiologic studies of lesions of the stomach.

The subject of diabetes will be presented in an extensive exhibit, supplemented by a question and answer conference in an adjoining room. Patients will be shown. The program will be under the direction of the Joslin Clinic, New England Deaconess Hospital, Boston, and the St. Louis Diabetes Association.

The exhibit will present changes in the small vessels of the conjunctiva in diabetic patients related to the severity and the age of the patient. New material will be presented on diabetic coma and pregnancy.

What driving advice a physician should give his patients will be pointed out in an exhibit symposium on the prevention of traffic accidents which will combine the experiences of the medical profession, the police and the National Safety Council. The aim of the symposium will be to effect a reduction in the toll of motor vehicle accidents which in 1952 caused 38,000 deaths and 1,350,000 injuries of more than a day's duration, with a total economic loss of about 3¾ billion dollars.

Manikin demonstrations on problems of delivery will be presented daily by an outstanding group of obstetricians in a room adjoining the Scientific Exhibit.

Featuring the scientific motion picture program will be preliminary demonstration of 3-D cinefluorography. This will present, in stereoscopic effect, the act of talking and swallowing, the passage of barium through the thoracic portion of the esophagus, views of the major thoracic structures—both superficial and internal—and scenes of a knee, a foot and a hand.

A departure this year will be the showing of motion pictures at night. A program will be presented Wednesday from 8:00 to 10:00 p.m. as well as from 1:00 to 3:00 p.m. on Tuesday, Wednesday and Thursday afternoons.

Among the subjects will be oral cancer, post anesthesia rooms, principles of fracture reduction, antituberculosis drugs, fracture reduction, congenital heart disease, fractures of the humerus and intra-articular injections of hydrocortisone.

Through the cooperation of Smith, Kline & French Laboratories, Philadelphia, another program of colored television will be presented. Surgical and clinical demonstrations will originate from the St. Louis City Hospital and will be shown on large screens in Kiel Auditorium.

The Scientific Exhibit will show how the general practitioner can meet the problems which confront him at times. The displays, so far as possible, will be correlated with the clinical presentations. The Technical Exposition will cover all types of office and medical practice needs.

The Spirit of the Law

. . . We would not regard the supplying of a limited quantity of a drug without prescription in a genuine emergency . . . as constituting the kind of "over the counter" sale of the dangerous drug that the law is designed to prevent. We have publicly stated our view that a druggist can properly supply a drug for a genuine emergency in the amount to take care of the emergency situation.—John L. Harvey, Associate Commissioner, Food & Drug Administration, *Drug Topics.*

Conclusive evidence

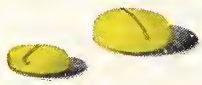
of the effectiveness and low toxicity

of Furadantin

in treating bacterial urinary tract infections

is provided in its recent

acceptance by the Council



FURADANTIN®

brand of nitrofurantoin

The N.N.R. monograph on Furadantin states:

"**Nitrofurantoin.—Furadantin (Eaton).—**

Actions and Uses.—Nitrofurantoin, a nitrofuran derivative, exhibits a wide spectrum of antibacterial activity against both gram-positive and gram-negative micro-organisms. It is bacteriostatic and may be bactericidal to the majority of strains of Escherichia coli, Micrococcus (Staphylococcus) pyogenes albus and aureus, Streptococcus pyogenes, Aerobacter aerogenes, and Paracolobactrum species. The drug is less effective against Proteus vulgaris, Pseudomonas aeruginosa, Alcaligenes faecalis, and Corynebacterium species; many strains of these organisms may be resistant to it. However, bacterial resistance to other anti-infective agents is not usually accompanied by increase in resistance of the organisms to nitrofurantoin. The drug does not inhibit fungi or viruses.

Nitrofurantoin is useful by oral administration for the treatment of bacterial infections of the urinary tract and is indicated in pyelonephritis, pyelitis, and cystitis caused by bacteria sensitive to the drug. It is not intended to replace surgery when mechanical obstruction or stasis is present. Following oral administration, approximately 40% is excreted unchanged in the urine. The remainder is apparently catabolized by various body tissues into inactive, brownish compounds that may tint the urine. Only negligible amounts of the drug are recovered from the feces. Urinary excretion is sufficiently rapid to require administration of the drug at four to six hour intervals to maintain antibacterial concentration. The low oral dosage necessary to maintain an effective urinary concentration is not associated with detectable blood levels. The high solubility of nitrofurantoin, even in acid urine, and the low dosage required diminish the likelihood of crystalluria.

Nitrofurantoin has a low toxicity. With oral administration it occasionally produces nausea and emesis; however, these reactions may be obviated by slight reduction in dosage. An occasional case of sensitization has been noted, consisting of a diffuse erythematous maculopapular eruption of the skin. This has been readily controlled by discontinuing administration of the drug. Animal studies, using large doses administered over a prolonged period, have revealed a decrease in the maturation of spermatozoa, but this effect is reversible following discontinuance of the drug. Until more is known concerning its long-term effects, blood cell studies should be made during therapy. Frequent or prolonged treatment is not advised until the drug has received more widespread study. It is otherwise contraindicated in the presence of anuria, oliguria, or severe renal damage.

Dosage.—Nitrofurantoin is administered orally in an average total daily dosage of 5 to 8 mg. per kilogram (2.2 to 3.6 mg. per pound) of body weight. One-fourth of this amount is administered four times daily—with each meal and with food at bedtime to prevent or minimize nausea. For refractory infections such as Proteus and Pseudomonas species, total daily dosage may be increased to a maximum of 10 mg. per kilogram (4.5 mg. per pound) of body weight. If nausea is severe, the dosage may be reduced. Medication should be continued for at least three days after sterility of the urine is achieved."

The NITROFURANS

O_2N R

A unique class of antimicrobials

EATON LABORATORIES Inc.
NORWICH, NEW YORK

℞: Common Sense

Jesse D. Rising, M.D.

Oral Antibiotics

Nearly all the writings and public utterances of the ivory tower professors these days contain grim warnings of the dangers of antibiotic therapy. It does not seem to occur to these authors that they see the difficult patients and those with rare reactions who naturally gravitate to the medical centers. They tend to overlook the fact that good therapy must be prompt therapy, and that the practitioner on the firing line must play the percentages. It is to the credit of the profession that they have not been frightened out of using agents that have a good chance of reducing morbidity and mortality by the purists that insist on reserving antibiotics for obviously desperate cases and those who have had a complete bacteriologic work-up.

There are, of course, many reasons why antibiotics should not be used indiscriminately, but the good physician can be discriminating without being hesitant. Most often one can surmise with a reasonable degree of accuracy what type of infectious agent is causing his patient's disease, and can without delay administer or prescribe the agent which is most likely to help the patient with the least chance of causing undesirable side actions. Another consideration must enter into the selection of the antibiotic to employ in treating the run of the mill infections: the cost of the therapy.

Extremely complex tables showing the sensitivity of a host of organisms to the various antibiotics are practically useless in daily practice because they confuse the physician who is then tempted to take refuge in the drug with the widest spectrum, and the highest price. This is unfortunate because such an agent is quite likely to have something less than optimal effectiveness against the particular organism under attack, and is more prone to produce undesirable side-actions by upsetting the normal flora of the respiratory and digestive tracts. In order to avoid the confusion caused by the complicated charts of sensitivity the following simplified scheme may be useful in determining which antibiotic is the most likely to be helpful:

"First Choice" Chart

Penicillin.

1. Gram positive cocci (except enterococci, i.e. Str. fecalis).
2. Gram negative cocci.
3. Spirochetal infections.
4. Cl. welchii.

Aureomycin, Chloramphenicol (Chloromycetin) and Oxytetracycline (Terramycin).

1. Enterocci.
2. Gram negative bacilli (chloramphenicol especially for typhoid).
3. Rickettsiae.
4. Some viruses.

Erythromycin (Ilotycin, Erythrocin).

1. H. pertussis.
2. C. diphtheriae.
3. Penicillin resistant hemolytic staphylococci.
4. Penicillin resistant non-hemolytic streptococci.

Streptomycin.

1. M. tuberculosis.
2. Some strains of Ps. aeruginosa.

Penicillin is still the antibiotic of first recourse in the treatment of most coccal infections. It should be used systemically to avoid common sensitivity reactions. Really troublesome reactions are few, and resistant strains rarely develop. For prompt effect parenteral injection is advisable, but oral preparations are useful in treating less fulminant infections, and for maintenance as well as prophylactic dosage. Buffered tablets of penicillin have been used with some success, but excessive dosage is required to attain satisfactory blood levels because about 80 per cent of the drug is destroyed in the digestive tract. One of the newer penicillins, Bicillin, promises to be superior to the others in this regard, and one can probably prescribe it with more confidence than the previously available oral dosage forms. It is available as a suspension (300,000 units per teaspoonful) and as tablets (200,000 units each). The injections of Bicillin do not give prompt, high blood levels and are chiefly recommended for maintenance and prophylaxis.

Aureomycin, Chloramphenicol (Chloromycetin) and Oxytetracycline (Terramycin) are easily grouped together, but each is superior to the others in certain infections. For example, Aureomycin excels in the treatment of viral pneumonia, psittacosis and lymphogranuloma venereum. Chloramphenicol is the only one that is really effective in the treatment of typhoid fever. These three are available in liquid dosage forms for pediatric use and in capsules of 50, 100 and 250 mg. They are rather expensive and frequently cause gastrointestinal upsets, and their use should be restricted to those situations in which the physician has reason to believe that penicillin will not be effective or when it has failed in a preliminary trial. This dogmatic statement does not apply to the patient who has an unusually severe infection or to the rare case which requires the full medical center work-up including sensitivity studies.

Recently Erythromycin (Ilotycin or Erythrocin) has received a great deal of publicity. One may say that it will be especially valuable in treating penicillin resistant hemolytic staphylococcal, enterococcal (Strep. fecalis) and a few pneumococcal infections as well as pertussis and diphtheria. For most other coccal infections it is inferior to penicillin, and it is extremely expensive. In general, patients requiring erythromycin therapy will have been hospitalized after a preliminary trial on penicillin has failed. Erythromycin is said not to affect markedly the normal flora of the colon. It is supplied in tablets of 100 mg. with a special enteric coating to prevent the destruction of the drug by the gastric juice.

Regarding cost of antibiotic therapy: it is not accurate to compare the price of these drugs capsule for capsule because of extreme variation in the amount necessary for different infections. One general statement is to the point; penicillin therapy is inexpensive; treatment with "broad spectrum" antibiotics is relatively expensive. For this reason the latter are economical only when they exceed penicillin in efficiency, in which case "price is no object."

Letters to Missouri Medicine

October 29, 1953

Dear Vincent:

I think you have been doing a fine job with Missouri Medicine, the Journal of the Missouri State Medical Association. May I say, however, that I was horrified to read on page 876 of the November issue that I had recently been elected President of the International College of Surgeons. I am sure that so far as you are concerned the mistake was unintentional and you had no desire to make me suffer by gratuitously bestowing on me not only membership but the highest office in the International College of Surgeons. Actually I was elected President of the International Congress of Surgeons which meets every two years and which will hold its 1955 meeting at Copenhagen. The Congress is the regular meeting of the old and thoroughly respected Societe Internationale de Chirurgie. It has no more connection with the International College of Surgeons than you or I have with the National Society of Chiropractic or whatever it may be called.

I am entirely out of sympathy with the parvenu organization known as the International College of Surgeons which used to claim that it was founded at Geneva, Switzerland, with some sort of a connection with the League of Nations but which was actually founded at Chicago. I have a particular abhorrence for that organization because there is still hanging over the American College of Surgeons and myself as the Chairman of the Board of Regents a suit for damages threatened by the International College of Surgeons. I believe this is the first time in the history of American medicine that one organization has threatened suit against another one.

You can see from what I have written that I do feel my reputation has been badly damaged, although quite unintentionally on your part, by the notice in Missouri Medicine for November. I cannot afford to let people think that I am even a member of the International College of Surgeons to say nothing of allowing my name to be put up as President of such an outfit.

I do hope you will give space for the publication of this letter in the next issue of your journal. I feel that I am entitled to have this letter published in order to clear my name.

Cordially yours,
Evarts A. Graham

(We're sorry this item was garbled. Ed.)

A Laboratory for Rural Practice

To the Editor:

Steelville, Mo.

The doctor trained in a modern medical school expects to possess a clinical laboratory for his practice. No doubt, the selection of an adequate equipment depends on a personal judgment. Laboratory procedures have expanded enormously and some doctors rely more on the data gathered in the laboratory rather than the facts obtained on physical examination. Too bad! We practitioners agree that the doctor's work cannot be mechanized. "In the field of laboratory medicine, however, there is an increasing tendency to relegate to a secondary position the role of the individual and to exalt the apparatus, the test and the report. This accentuation of the inanimate in Medicine is a trend to be deplored and strongly resisted." (Caro: *Arch. Dermat.* Jan. 1953.)

You probably have observed that the clinical reports in medical journals consist chiefly of data derived from the laboratory work. The physician who has little confidence in his own judgment orders a "general laboratory" examination of the tissues and body fluids. Figures do not lie, it is said, but data from laboratory often confuse the doctor.

Parenthetically, let me emphasize that the subject of laboratory medicine has grown enormously; much more extensive than symptomatic cognizance. I foresee a new profession—the "Medical Technician" or whatever he may be called, with legal rights, maximum emoluments and a professional status.

I believe that the practitioner should make most of the necessary tests himself to corroborate his diagnosis. In medical research, however, no limitations of laboratory investigations can be outlined.

With Dr. Caro, I agree that "a blind dependence on laboratory diagnosis does very little to develop clinical judgment and skill." A consultation with an older physician is far more educational and trustworthy. A half hour's conversation with other members of the family may also yield more dependable data than tests of the blood or secretions.

If I remember correctly it was James MacKenzie, the Scottish cardiologist, who protested against the honor given him for the invention of the polygraph, and his enormous contributions to the signs and symptoms of heart disease were ignored. So now the electrocardiogram (the technic is annually changing) has become the favored examination for every old man or woman, but it requires a heart specialist to interpret the obtained curves correctly.

Frequently, the general practitioner at the onset of an acute illness does not and cannot make more than a presumptive diagnosis, and the treatment obviously is only a trial. In fact, the trial and error method seems universal for many practitioners. A suspected pneumonia, meningitis or scarlatina is treated with full doses of the sulfonamides and antibiotics. Dependence on the clinical signs and symptoms for successful therapy becomes more reliable only after considerable experience.

A painstaking study of the history and a careful physical examination will remain the practitioner's chief professional support for curing and preventing disease. Yet, the physician who cannot make a satisfactory physical examination is compelled to have a "complete check-up" by the laboratory; but the wise doctor will decide what chemical tests should be made, what roentgen examinations are necessary and what specialists should be consulted.

Do not neglect necessary laboratory tests. The State Laboratory at Jefferson City is always ready to help, and the state furnishes the necessary culture tubes and outfits for conveying serum and exudates and pus, but do not ask for these examinations unless

really indicated. The three Public Health Laboratories made more than 400,000 tests in 1950; and these do not include the examinations made in St. Louis, St. Louis County, Kansas City and St. Joseph. The number of these examinations can be cut down, if the doctor will examine the patient carefully, then rest and think: What tests can be made in your own laboratory? But the shortage of active practitioners limits the time which can be devoted to accurate laboratory investigations. The country doctor has too many patients; consequently, he is likely to shift difficult diagnostic problems to the laboratory. A shortage of physicians! More laboratory technicians!

JOHN ZAHORSKY, M.D.

Low Forceps

An Unusual Case of Multiple Psychoses

ROBERT LAMAR, M.D.

S. C., age indeterminate, unemployed, Caucasian, in hyperexcitable state, interviewed briefly at my home where patient appeared voluntarily evening of December 24. The following spotty history was elicited and the case, with a few general conclusions drawn, is presented herewith as a matter of interest due to the multiplicity of psychobiologic aberrations.

In January, 1933, patient began to suffer from insomnia and fatigue due to business worries "that they're trying to take my job away from me." Obsessive concern over annual business trip. In following several years marked anxiety symptoms progressive, with frequent hysterical outbursts following conscious efforts to suppress magnified paternalistic tendencies. In 1948, following inability to obtain many desired visas for prospective world tour and on being told by advisors that remainder of tour was entirely unnecessary, patient showed apparent withdrawal from reality and had hallucinations that reindeer were being foundered in his back yard by an unsolicited oversupply of free hay. After greatly curtailed trip in December, 1948, secluded self, spoke of being covered with excrement, and fear of harming others. Threats of further unavoidable business competition brought paranoid delusions of being persecuted by unspecified man "who lives in a white house." References to such an individual brought on violent reactions varying from fits of destruction to complete apathy. No family history obtained except a vague allusion that "we're all one goddam big happy family now." It is of interest that a long standing speech defect, that of frequent interspersing of such neologisms as "Ho ho" and "Ha ha" throughout all sentences, has completely disappeared. In November, 1952, patient suddenly began to show great agitation combined with renewed interest in self and surroundings. There followed a short interval of garrulousness, elation, pugnacity, excitement. During this extreme manic state there were occasional bursts of productive activity.

Brief physical examination revealed trembling, somewhat disoriented, elderly male showing signs of degeneration and recent weight loss. Eccentric attire of red coat and pantaloons, trimmed in white fur; long white beard, extensive facial telangiectasis and puffiness. Blood pressure, pulse and respirations markedly elevated probably due to agitation at urban surroundings. Chattering teeth and perirectal edema precluded temperature determination. Heart moderately shrunken, lung sounds wheezy, abdomen pendulous with no masses except for money belt which patient refused to remove. Laboratory analysis refused when patient overheard reference to "free cholesterol."

Patient abruptly terminated interview and examination, and clearly stated determination to return directly to his home and to close out business entirely. At this time he was showing evidence of acute reversal of attitude, having apparently during early evening undergone successive shocks with which he was now unable to cope. There were incoherent references to sundry amusement programs, governmental policies, contests and his fellow man. He left crying out, "And to all a good night." It is probably valid to conclude that patient will rapidly attain a deep rut of depression in which he will show little change for some time to come—if at all.

M. A. G. P. MEETS IN JEFFERSON CITY

At the late October meeting of the Missouri Academy of General Practice, William F. Wagenbach, M.D., St. Louis, was elected president. He succeeds W. A. Kenneth Glover, M.D., Mount Vernon. The new president-elect is Joseph Getelson, M.D., Kansas City, and C. G. Stauffacher, M.D., Sedalia, is the new vice president.

The new directors are Richard Becker, M.D., Kansas City; John Pearl, M.D., St. Louis, and E. Claude Bohrer, M.D., West Plains. Peter Siegel, M.D., Smithton, was reelected secretary-treasurer, and Mr. Raymond McIntyre, St. Louis, was reappointed field secretary.

Among the prominent MoMedics who presented papers were: Ralph Kinsella, M.D. St. Louis; Henry McCarroll, M.D., St. Louis; Thomas McMillan, M.D., Kansas City; Joseph Jaudon, M.D., St. Louis; Roscoe Pullen, M.D., Columbia; Charles Brasher, M.D., Mount Vernon; Harry Stauffer, M.D., Jefferson City; Carl Moyer, M.D., St. Louis, and William Sodeman, M.D., Columbia.

POSTGRADUATE COURSE IN ANESTHESIA

"Pentothal Anesthesia" will be the subject of the second postgraduate course presented by the Missouri State Society of Anesthesiologists. The course will be held at St. John's Hospital, Springfield, from 10:00 a.m. to 3:30 p.m. on December 6. W. W. Tillman, Jr., M.D., Springfield, will open the session.

The program will consist of "Pharmacology," presented by Douglas Eastwood, M.D., St. Louis;

"Methods of Administration," by Oral B. Crawford, M.D., Springfield; "Advantages and Disadvantages, Indications and Contraindications," by Louis Porter, M.D., Kansas City; "Complications of Pentothal Anesthesia and Abuses of Pentothal Anesthesia," by Max Miller, M.D., Kansas City, Kansas; "Pentothal in Dental Anesthesia," by Harold J. Freiheit, M.D., St. Louis. A discussion period will follow the program, as will the premiere showing in the Midwest of a color sound movie on "Intravenous Anesthesia" which was prepared by the American Society of Anesthesiologists through a grant of Abbott Laboratories.

MEDICAL SECRETARIES MEET

Miss Clemence Broccard, St. Louis, was installed as president of the Medical Secretaries and Assistants Society of Greater St. Louis at a meeting on November 19. Other officers installed were Miss Eleanore Schmied, first vice president; Miss Audrey Stigemier, corresponding secretary; Miss Veronica Januzzo, recording secretary, and Mrs. Bernadean Tisarkewiez, treasurer. R. O. Muether, M.D., installed the officers following dinner in the Tower Room, Congress Hotel, St. Louis. The December meeting will be a Christmas party at the home of Miss Veronica Jannuzzo on December 17.

Index to Volume 50

A

Abdominal Trauma—Starkloff, Bailey and Rutledge 918
Aberrant Renal Artery Causing Pain Without Obstruction —Case Report—Kopp 939
Adenomatous Polyps of the Large Bowel—LeBlank and Krause 925
Alcolohism, Neurologic Complications of Chronic—Tureen and Hahn 766
Allebach, H. K. B., and McPhee, W. R.—Carbon Tetrachloride Poisoning 106
Allen, William E.—Carcinoma of the Cervix; Role of Irradiation 262
American Medical Association Will Meet in St. Louis ... 880
Amniotic Fluid Pulmonary Embolism—Bacala 411
Among Ourselves 54, 132, 210, 284, 364, 438, 626, 706, 786, 870, 944
Anesthesia in Obstetrics and Minor Surgery, Trichlorethylene Analgesia and—Postgraduate Review—Brown and Fehlman 609
Technics in the Poor Risk Patient, Importance of—White 922
Annual Fall Conference 716
Session, Minutes 481
Pictures 441, 442
Program 136, 216, 295
Antibiotics 720
Appendicitis, Acute, Mortality of, Treated Surgically in a Small General Hospital, Fifteen Year Review—Hill and Butcher 341
Application of Radioisotopes to Clinical Practice—Statland and Rubin 848
Arthritis and Allied Conditions, Use of Hydrocortisone (Compound F) by Local Injection in—Ramsey and Key 604
Assistant Secretary of Defense 716

B

Bacala, J. C.—Amniotic Fluid Pulmonary Embolism 411
Bailey, Drennan, et al.—Abdominal Trauma 918
Banta, Parke M.—Our Outlook—Special Article 622
Banthine Therapy for Enuresis—O'Malley and Owens .. 188
Bauer, W. W.—Hygeia—Today's Health—Special Article 701
Benson, George S.—Good Physicians, Good Citizens—Special Article 435
Bernreiter, Michael—Treatment of Acute Myocardial Infarction 762
and Goldman, Stanley—Double Rupture of the Atrial Wall—Case Report 125
Berry, Maxwell G.—Differential Diagnosis of Chest Pain 102
Paul T., and Smith, Robert W.—Ulcers: Three Times Perforated—Case Report 51
Black, H., et al.—Translumbar Aortography in Infants Using 70 Per Cent Urokon as a Contrast Medium 179
Blackburn, Charles M.—Laboratory Tests of Thyroid Function 678
Blackman, Nathan—The Culpability of the Homosexual 27
Bladder, Giant Calculus of—Burford, Burford and Glenn 339
Boler, T. D., et al.—Translumbar Aortography in Infants Using 70 Per Cent Urokon as a Contrast Medium 179
Book Reviews—
Adams, George W.—Doctors in Blue 569
Adler, Francis Heed—Gifford's Textbook of Ophthalmology 800
Alexander, Leo—Treatment of Mental Disorder 800
Ambulatory Proctology—Cantor 312
Antibiotic Therapy—Welch and Lewis 704
Antihistamines—Feinberg et al. 572
Atlas of Normal Radiographic Anatomy—Meschan ... 850
Barker, Joseph M.—Unipolar Electrocardiogram 859
Battle for Mental Health—Maloney 649
Beach, Sylvester Judd—Principles of Refraction 358
Bean, William Bennett—Osler Aprorisms, Sir William 804
Behrman, Howard T.—The Scalp in Health and Disease 313
Bevelander, Gerrit, and Hoskins, Margaret M.—Essentials of Histology 617
Binocular Vision—Ogle 382
Bone Tumors—Lichtenstein 208
Botsford, Thomas W., and Dunphy, J. Englebert—Physical Examination of the Surgical Patient 800
Brown, James Barrett, and McDowell, Frank—Plastic Surgery of the Nose 226
Cantor, Alfred J.—Ambulatory Proctology 312
Cardiac Therapy—Stewart 572
Century of Medicine—Merritt 527
Clinical Diagnosis by Laboratory Methods—Todd, Sanford and Wells 789
Conn, Howard F.—Current Therapy 1952 208
Consolazio, C. Frank, et al.—Metabolic Methods 759
Current Therapy 1952—Conn 208
Dunphy, J. Englebert, and Botsford, Thomas W.—Physical Examination of the Surgical Patient 800
DeSanctis, Adolph G.—Handbook of Pediatric Medical Emergencies 231
Doctors in Blue—Adams 569
Dynamic Psychiatry—London 203
Encyclopedia of Aberrations—Podolsky 800
Essentials of Histology—Hockins and Bevelander 617
Feinberg, Alan R., et al.—Antihistamines 572
Samuel M., et al.—Antihistamines 572
Francis, Carl C.—Human Pelvis 759
Functional Endocrinology From Birth Through Adolescence—Talbot et al. 802
Gifford's Textbook of Ophthalmology—Adler 800
Gregory, John E.—Pathogenesis of Cancer and Applied Therapy 704
Handbook of Digestive Diseases—Kantor and Kasich 802
of Nutrition—American Medical Association 112
of Pediatric Medical Emergencies—DeSanctis 231
Haun, Paul—Psychiatric Sections in General Hospitals 570
History and Development of Neurological Surgery—Sachs 185
Hoskins, Margaret M., and Bevelander, Gerrit—Essentials of Histology 617
Human Pelvis—Francis 759
Hyndman, Olan R.—Origin of Life and the Evolution of Living Things 354
Kaehele, Edna—Living With Cancer 891
Kantor, John L., and Kasich, Anthony M.—Handbook of Digestive Diseases 802
Kasich, Anthony M., and Kantor, John L.—Handbook of Digestive Diseases 802
Krupp, Marcus A., et al.—Physician's Handbook 702
Krusen, Frank H.—Physical Medicine and Rehabilitation for the Clinician 802
Lewin, S. A.—Sex After Forty 888
Lewis, Charles N., and Welch, Henry—Antibiotic Therapy 704
Lichtenstein, Louis—Bone Tumors 208
Living With Cancer—Kaehele 891
London, Louis S.—Dynamic Psychiatry 203
McDowell, Frank, and Brown, James Barrett—Plastic Surgery of the Nose 226
Malkiel, Saul, et al.—Antihistamines 572
Maloney, James Clark—The Battle for Mental Health 649
Manual of Electro Cardiography—Smith 704
Merritt, Webster—Century of Medicine 527
Meschan, Isadore—Atlas of Normal Radiographic Anatomy 850
Metabolic Methods—Consolazio et al. 759
Oculorotary Muscles—Scobee 804
Ogle, Kenneth N.—Binocular Vision 382
Origin of Life and Evolution of Living Things—Hyndman 354
Osler Aprorisms, Sir William—Bean 804
Pathogenesis of Cancer and Applied Therapy—Gregory 704
Pathologic Physiology—Sodeman 804
Physical Examination of the Surgical Patient—Dunphy and Botsford 800
Medicine and Rehabilitation for the Clinician—Krusen 802
Physician's Handbook—Krupp et al. 702
Plastic Surgery of the Nose—Brown and McDowell 226
Plunkett, Richard J.—Standard Nomenclature of Diseases and Operations 888

Podolsky, Edward—Encyclopedia of Aberrations 800
Principles of Refraction—Beach 358
Psychiatric Sections in General Hospitals—Haun 570
Sachs, Ernest—History and Development of Neurological Surgery 185
Sanford, Arthur Hawley, et al.—Clinical Diagnosis by Laboratory Methods 798
Scalp in Health and Disease—Behrman 313
Scobee, Richard G.—Oculorotary Muscles 804
Sex After Forty—Lewin 888
Smith, Benjamin F.—Manual of Electro Cardiography 704
Sodeman, William A.—Pathologic Physiology 804
Standard Nomenclature of Diseases and Operations—Plunkett 888
Steward, Harold J.—Cardiac Therapy 572
Sweet, Richard H.—Thoracic Surgery 23
Tait, Edwin Forbes—Textbook of Refraction 649
Talbot, Nathan B., et al.—Functional Endocrinology From Birth Through Adolescence 802
Textbook of Refraction—Tait 649
Thoracic Surgery—Sweet 23
Todd, James Campbell, et al.—Clinical Diagnosis by Laboratory Methods 798
Treatment of Mental Disorders—Alexander 800
Unipolar Electrocardiogram—Barker 859
Welch, Henry, and Lewis, Charles N.—Antibiotic Therapy 704
Wells, Benjamin B., et al.—Clinical Diagnosis by Laboratory Methods 798
Bowel, Functional Disorders of—Ferris 681
Brown, Seymour, and Fehlman, Bernard F.—Trichlorethylene Analgesia and Anesthesia in Obstetrics and Minor Surgery—Postgraduate Review 609
Bryan, Theodore L., et al.—Pancreatic Insufficiency—Postgraduate Review 115
Burford, C. E., et al.—Giant Calculus of the Bladder ... 339
E. H., et al.—Giant Calculus of the Bladder 339
Burke, Robert J.—Treatment of Chronic Constipation in Children 343
Butcher, R. W., and Hill, J. H.—Mortality of Acute Appendicitis Treated Surgically in a Small General Hospital, Fifteen Year Review 341
Byrne, John E.—Cortisone in the Treatment of Strictures of the Human Male Urethra 23
and Melick, William F.—Clinical Experiences With a New Medium in Intravenous Orography 599

C

Campbell, Darrell A.—Management of Chronic Obstruction of the Venous and Lymphatic Channels 675
Cancer of the Prostate, Early Diagnosis of—Clinical Conference—Melick and Macnish 273
Capsule Clinics 8, 88, 174, 252, 336, 402, 588, 662, 750, 830, 906
Carbon Tetrachloride Poisoning—Allebach and McPhee 106
Carcinoma of the Cervix: The Role of Irradiation—Allen 262
of the Prostate and Its Treatment by Radical Perineal Prostatectomy, Diagnosis of Early—Case Report—Melick and Naryka 695
Cardiac Failure, Digilaud as Compared to the Powdered Leaf of Digitalis—Wolffe and Dale 32
Cardiovascular Therapy, Current Thoughts on—Postgraduate Review—Falk 931
Casberg, Melvin A., et al.—Pancreatic Insufficiency—Postgraduate Review 115
Case Reports—
Aberrant Renal Artery Causing Pain Without Obstruction—Kopp 939
Concomitant Pyloric Obstruction and Perforation With a Suggested Method of Treatment—Potter 863
Diagnosis of Early Carcinoma of the Prostate and Its Treatment by Radical Perineal Prostatectomy—Melick and Naryka 695
Double Rupture of the Atrial Wall—Goldman and Bernreiter 125
Esophageal Leiomyomas; Surgical Treatment—Shoulders 49
Giant Benign Ulcer of the Duodenum—Ruby 357
Liposarcoma—Cassel 279
Pneumothorax Complicating Pneumoperitoneum Therapy—Lawton 199
Ulcers: Three Times Perforated—Smith and Berry 51
Weber-Christian Disease: Report of Two Cases Treated With Cortisone—Harrison and Saxton 427
Xanthine Calculus—Mackey 617
Cassel, Melvin A.—Liposarcoma—Case Report 279
Catholic Hospital Association 380
Cephalalgia, Use of Suppositories in the Treatment of Hereditary—Charles 186
Charles, Cecil M.—Use of Suppositories in the Treatment of Hereditary Cephalalgia 186
Chest Injuries: Diagnosis and Treatment—Dorner 835
Pain, Differential Diagnosis of—Berry 102
Children, Management by the General Practitioner of Emotional Problems in—Postgraduate Review—Hirschberg 853
City Hospital Alumni Meet 373
Civil Service Openings 373
Clinical Experiences With a New Medium in Intravenous Urography—Byrne and Melick 599
Committee Members and Officers of the Association 470
Concomitant Pyloric Obstruction and Perforation With a Suggested Method of Treatment—Case Report—Potter 863
Congenital Deformities of the Hands and Feet—Paletta 19
Constipation in Children, Treatment of—Burke 343
Cope, James C.—Genito-urinary Injuries 760
Cortisone in the Treatment of Strictures of the Human Male Urethra—Byrne 23
Council Minutes 138, 646, 883
Councilor Districts and Map 472
District News 61, 144, 288, 291, 372, 450, 638, 718, 793, 882, 953
County Location of Towns 530
Medical Societies and Officers 474
Crossroad Comment 12, 90, 168, 248, 330, 400, 590, 670, 744, 824, 904
Culpability of the Homosexual—Blackman 27
Curiosa et Trivia 5, 85, 165, 245, 325, 397, 581, 661, 741, 821, 901
Current Thoughts on Cardiovascular Therapy—Postgraduate Review—Falk 931

D

Dale, Anthony D., and Wolffe, Joseph B.—Digilanid as Compared to the Powdered Leaf of Digitalis 32
Deaths—
Baysinger, Stuart L. 291
Bloomer, Gaylord T. 216
Bond, Van H. 874
Brainard, Benjamin F. 874
Brockelmann, Emmy Ross 716
Brown, Arthur C. F. 60
Burst, Emil A. 716
Caldwell, James C. 792
Cochran, J. Howard 637
Colby, Buford M. 716
Cunningham, Harvey L. 637
Danglade, James H. 792
DeLamater, Hasbrouck 874
Denny, Chester H. 372
Dickson, James A. 61
Dyer, Clyde P. 291
Dyer, John H. 874
Edmundson, John Phil 216
Edwards, Edwin D. 60
Emery, Edgar V. 372
Engelbreit, Joseph J. 637
Engman, Martin F., Sr. .....
Epperly, R. G. 61
Eubank, Ambrose E. 291
Farthing, Robert R. .....
Flanary, David L. 216
Fordyce, Claude P. 792
Gibson, Ora J. 637
Goldwasser, Herbert V. 372
Griot, George A. 637
Hall, Willis 716
Hardesty, John F. 637
Harrington, G. Leonard 448
Heinrichs, Julius C. 372
Herington, Warner 60
Herron, W. Floyd 874
Hess, H. Lewis 716
Jost, William E. 874
Keeling, Irene C. .....
Klippel, Edward T. 448
Leighton, William E. 60
Lewis, Andrew L. 874
McKinney, Ralph F. 448
Marder, Sumner 448
Margulis, Abraham A. 291
Menown, Roland R. 716
Miloslavich, Edward L. 60
Morse, Frank L. 216
Motley, Elliot R. 448
Murphy, John Patrick, Jr. 372
Myers, George T. 136
Parker, Rainey C. 136
Pipkin, Walter D. 448
Prichard, Joseph A. 372
Ragan, Romulus C. 874
Rassieur, Louis 637
Reim, Hugo 448
Reutter, Garfield A. 448
Ryburn, John Patrick 716
Sandperl, Harry 637
Sasaki, George R. 372
Schmidtke, Edwin C. 136
Seelig, Major G. 372
Settle, Charles T. 216
Shelton, Harold J. 716
Sherwin, Charles F. 291
Skinner, Edward H. 216
Smith, James D. 448
Smith, Reuben M. 291
Soper, Horace W. 874
Sum, Othmar J. 637
Tainter, Frank J. 216
Thieme, Harry L. 448
Trimble, William K. 60
Wachowiak, Marion 448

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

RADIUM & RADIUM D+E

(including Radium Applicators)

For All Medical Purposes

Est. 1919

Quincy X-Ray & Radium Laboratories

(Owned and Directed by a Physician-Radiologist)

HAROLD SWANBERG, B.S., M.D., Director
W. C. U. Bldg., Quincy, Illinois

HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

Surgical Instruments, Invalid and Sick Room Supplies
Post-Operative Belts, Elastic Hosiery and Trusses Fitted

NEwstead 3222 REGISTERED NURSE IN ATTENDANCE 3456 Lindell Blvd.

THE MARY POGUE SCHOOL

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request

G. H. Marquardt, M.D.
Medical Director

Barclay J. MacGregor
Registrar

27 Geneva Road, Wheaton, Illinois (Near Chicago)

WEST TEXAS MATERNITY HOSPITAL

For Unfortunate Young Women

Secluded, Homelike Surroundings. Excellent Medical Care. Arrangements made for Adoption through Licensed Agency. Reasonable Rates.

Patients Received Any Time During Pregnancy

2306 Hemphill Fort Worth, Texas Phone WEbster-8257

Rx Zemmer

PHARMACEUTICALS

A complete line of laboratory controlled ethical pharmaceuticals. Chemists to the Medical Profession since 1903. Mo. 12-53

THE ZEMMER COMPANY, Pittsburgh 13, Pennsylvania

Walton, Josiah H. 637
Wilbur, Herbert L. 372
Wilson, R. P. C. 716
Diagnosis of Early Carcinoma of the Prostate and Its Treatment by Radical Perineal Prostatectomy—Case Report—Melick and Naryka 695
of Pelvic Tumors—Mixson 684
Differential Diagnosis of Chest Pain—Berry 102
of Peripheral Edema—Hill 915
Differentiation Between Elective and Emergency Care 408
Digilanid as Compared to the Powdered Leaf of Digitalis in Congestive Cardiac Failure—Wolffe and Dale 32
Digitalis in Congestive Cardiac Failure, Digilanid as Compared to the Powdered Leaf—Wolffe and Dale ... 32
Diphtheria, Increased Incidence and Death Rate of, and Pertussis—Dwyer 30
Diveley, Rex L., and Kiene, Richard H.—Injuries to the Tarsus Bones 595
Division of Health 14, 94, 176, 328, 406, 588, 912
Dorner, Ralph A.—Chest Injuries: Diagnosis and Treatment 835
Double Rupture of the Atrial Wall—Case Report—Goldman and Bernreiter 125
Dr. Frank H. Lahey 722
Duncan, Rev. Herbert E.—The Physician and Easter—Special Article 283
Dwyer, Thomas L.—Increased Incidence and Death Rate in Diphtheria and Pertussis 30

E

Early Diagnosis of Cancer of the Prostate—Clinical Conference—Melick and Macnish 273
Edema, Peripheral, Differential Diagnosis of—Hill 915
Editorials 54, 132, 210, 284, 364, 438, 626, 706, 786, 870, 944
Embolism, Amniotic Fluid Pulmonary—Bacala 411
Enuresis, Banthine Therapy for—O'Malley and Owens 188
Esophageal Leiomyomas: Surgical Treatment—Case Report—Shoulders 49
Estradiol 17-Cyclopentyl-Propionate—Soule 345

F

Falk, O. P. J.—Current Thoughts on Cardiovascular Therapy—Postgraduate Review 931
Fehlman, Bernard F., and Brown, Seymour—Trichlorethylene Analgesia and Anesthesia in Obstetrics and Minor Surgery—Postgraduate Review 609
Fellowship in Arthritis 726
Ferris, Carl R.—Functional Disorders of the Bowel 681
Financial Planning for Members of the Medical Profession—Special Article—Trachtman 129
Statement for 1952 312
Fiorinal for Sympathetic Treatment of Nonvascular Headaches—Ryan 259
First—Special Article—H'Doubler 866
Forty Years Ago 10, 90, 170, 250
Fraternally Yours 56, 134, 212, 286, 366, 440, 630, 708, 788, 872, 946
Friedl, Rev. John C.—How Much Is "Some" Government?—Special Article 206
From Natural Disasters to the Hydrogen Age—Special Article—Hungate 866
Functional Disorders of the Bowel—Ferris 681

G

Gamma Globulin Distribution 716
Gellis, Sydney S.—Pediatric Emergencies in the Home .. 837
Genito-Urinary Injuries—Cope 760
Geriatric Medicine, Principles of—Postgraduate Review—Kountz 691
Giant Benign Ulcer of the Duodenum—Case Report—Ruby 357
Calculus of the Bladder—Burford, Burford and Glenn 339
Glenn, J. E., et al.—Giant Calculus of the Bladder 339
Goldman, Stanley, and Bernreiter, Michael—Double Rupture of the Atrial Wall—Case Report 125
Good Physician, Good Citizens—Special Article—Benson 435
G. P. of the Year 223
—St. Louis Meeting 378
Grayson, Richard R.—Technic for Using Suction in Cases of Snake Bite 763
Guest Editorials 6, 85, 166, 246, 326, 398, 582, 662, 742, 822, 902

H

Haddock, James N.—Medical Aspects of Emotional Immaturity in the Young Adult—Postgraduate Review .. 349
Hahn, Andrew L., and Tureen, Louis L.—Neurologic Complications of Chronic Alcoholism 766
Hall, Thomas B.—John Sappington, M.D.—Special Article 941
Halpern, Lawrence K.—Treatment of Periungual Warts 765
Harrison, L. B., and Saxton, John A.—Weber-Christian Disease: Report of Two Cases Treated With Cortisone—Case Report 427
H'Doubler, F. T.—First—Special Article 866
Headaches, Fioinal for Sympathetic Treatment of Nonvascular—Ryan 259
Health Care Teamwork 224
Heart Failure, Congestive, Treatment of—Jones 844
Hill, J. H.—Differential Diagnosis of Peripheral Edema 915
and Butcher, R. W.—Mortality of Acute Appendicitis Treated Surgically in a Small General Hospital 341
Homosexual, The Culpability of—Blackman 27
How Much Is "Some" Government?—Special Article—Friedl 206
Hungate, Carroll P.—Is Present Civil Defense Planning Realistic?—Special Article 621
—Keeping the Record Straight in Medical Civil Defense Planning and Operation—Special Article 702
Misconceptions Concerning Nuclear Explosions—Special Article 431
Hyaline Membrane Formation in the Newborn: Hematogenic Shock as a Possible Etiologic Factor—Landau 183
Hydrocortisone Acetate for Local Treatment in Rheumatic Diseases—Zuckner 687
(Compound F), Use of, by Local Injection in Arthritis and Allied Conditions—Ramsey and Key 604
Hygeia—Today's Health—Special Article—Bauer 701
Hypersplenism, Surgical Management of—Postgraduate Review—Zollinger 193
Hyperthyroidism: Present Concepts in Treatment—Postgraduate Review—Jackson 777
Use of Radioactive Iodine in the Diagnosis and Treatment of—Postgraduate Review—Mack 267

I

Importance of Anesthesia Technics in the Poor Risk Patient—White 922
Increased Incidence and Death Rate in Diphtheria and Pertusis—Dwyer 30
Injuries to the Tarsus Bones—Diveley and Kiene 595
In Memoriam 60, 136, 216, 291, 372, 448, 637, 716, 792, 874, 952
Introduction for Physicians to an In-Patient Rehabilitation Service in a General Hospital—Machek 414
Is Present Civil Defense Planning Realistic?—Special Article—Hungate 621

J

Jackson, Arnold S.—Hyperthyroidism: Present Concepts in Treatment—Postgraduate Review 777
Jones, T. Reid—Treatment of Congestive Heart Failure 844

K

Keeping the Record Straight in Medical Civil Defense Planning and Operation—Special Article—Hungate .. 702
Key, J. Albert, and Ramsey, R. H.—Use of Hydrocortisone (Compound F) by Local Injection in Arthritis and Allied Conditions 604
Kiene, Richard H., and Diveley, Rex L.—Injuries to the Tarsus Bones 595
Knight, William A., Jr., et al.—Pancreatic Insufficiency—Postgraduate Review 115
Kopp, Jules H.—Aberrant Renal Artery Causing Pain Without Obstruction—Case Report 939
Kountz, William B.—Principles of Geriatric Medicine—Postgraduate Review 691
Krause, G. Lynn, and LeBlank, Leo J.—Adenomatous Polyps of the Large Bowel 925

L

Laboratory Tests of Thyroid Function—Blackburn 678
Lacerations of the Face—Macomber 755
Landau, Daniel B.—Hyaline Membrane Formation in the Newborn: Hematogenic Shock as a Possible Etiologic Factor—Landau 183
Lawton, John T.—Pneumothorax Complicating Pneumoperitoneum Therapy—Case Report 199
LeBlank, Leo J., and Krause, G. Lynn—Adenomatous Polyps of the Large Bowel 925
Legislation 216, 310, 637, 646
Leiomyomas, Esophageal: Surgical Treatment—Case Report—Shoulders 49
Lerman, J.—Recent Advances in Thyroid Physiology and Treatment—Postgraduate Review 35
Letters to Missouri Medicine—
Geriatrics 643
In Error 962
Laboratory for Rural Practice 962
Low Forceps 643
Number of Physicians 798
Steelville 724
Woman's Auxiliary 643
Lincoln County Hospital 718
Liposarcoma—Case Report—Cassel 279
Low Forceps 224, 380, 726, 888, 961

M

McPhee, W. R., and Allebach, H. K. B.—Carbon Tetrachloride Poisoning 106
Machek, Otakar—An Introduction for Physicians to an In-Patient Rehabilitation Service in a General Hospital 414
Mack, Robert E.—The Use of Radioactive Iodine in the Diagnosis and Treatment of Hyperthyroidism—Postgraduate Review 267
Mackey, John F.—Xanthine Calculus—Case Report 617
Macnish, James M., and Melick, William F.—Early Diagnosis of Cancer of the Prostate—Clinical Conference .. 273

Macomber, Douglas W.—Lacerations of the Face 755
Management of Chronic Obstruction of the Venous and Lymphatic Channels—Campbell 675
by the General Practitioner of Emotional Problems in Children—Postgraduate Review—Hirschberg 853
Maternal Study of St. Louis 220
Mayerberg, Samucl B.—Physician as a Citizen—Special Article 361
Medical Aspects of Emotional Immaturity in the Young Adult—Postgraduate Review—Haddock 349
School, Responsibilities of to the State It Serves—Wescoe 841
Movie 373
Meetings 57, 135, 213, 287, 367, 448, 631, 709, 789, 873, 947
Melick, W. F., et al.—Translumbar Aortography in Infants Using 70 Per Cent Urokon as a Contrast Medium 179
William F., and Byrne, John E.—Clinical Experiences With a New Medium in Intravenous Urography 599
and Macnish, James M.—Early Diagnosis of Cancer of the Prostate—Clinical Conference 273
and Naryka, Joseph J.—Diagnosis of Early Carcinoma of the Prostate and Its Treatment by Radical Prostatectomy—Case Report 695
Members in the News 58, 136, 214, 288, 368, 444, 632, 710, 790, 876, 948
Membership Roster, Alphabetical 533
Roster by County Society Membership 549
Minutes of 95th Annual Session 481
Misconceptions Concerning Nuclear Explosions—Special Article—Hungate 431
Missouri Academy of General Practice 796
Medicine in Review 750, 830, 910
Physician Comments on Poliomyelitis 793
Mixson, William C.—Diagnosis of Pelvic Tumors 684
Mortality of Acute Appendicitis Treated Surgically in a Small General Hospital, Fifteen Year Review—Hill and Butcher 341
Mrs. Skinner Receives Medal 375
M. S. M. A. Host to A. M. A. Interim Session .....
Muether, R. O.—Professional Relations Between Physicians and Psychologists—Special Article 205
Musings 57, 135, 213, 287, 367, 443, 631, 709, 789, 873, 947
Myocardial Infarction, Treatment of Acute—Bernreiter 762

N

Naryka, Joseph J., and Melick, William F.—Diagnosis of Early Carcinoma of the Prostate and Its Treatment by Radical Perineal Prostatectomy—Case Report 695
Neuralgia, Surgical Decompression of the Gasserian Ganglion and the Posterior Root of the Trigeminal Nerve in the Treatment of Trigeminal—Woolsey and Tsang 99
Neurologic Complications of Chronic Alcoholism—Tureen and Hahn 766
New Autopsy Bill Passed 646
Drugs 68, 224, 384, 648
Members ..60, 136, 216, 291, 372, 448, 637, 716, 792, 878, 952

O

Obstetrics and Minor Surgery, Trichlorethylene Analgesia and Anesthesia in—Postgraduate Review—Brown and Fehlman 609
O'Donoghue, James—Selection of the Far Advanced Cancer Patient for Roentgentherapy—Postgraduate Review 419
Of This and That 398, 642, 726, 742, 828
Officers and Committee Members of the Missouri State Medical Association 470
of the Missouri State Medical Association 528
of the Woman's Auxiliary 478
O'Malley, James F., and Owens, Robert H.—Banthine Therapy for Enuresis 188
Others Say 16, 66, 122, 172, 256, 385, 450, 590, 592, 672, 752, 832, 908
Our Auxiliary 10, 96, 174, 254, 334, 402, 584, 668, 748, 828, 908
Outlook—Special Article—Banta 622
Owens, Robert H., and O'Malley, James F.—Banthine Therapy for Enuresis 188

P

Pancreatic Insufficiency—Postgraduate Review—Bryan, Casberg and Knight 115
Pediatric Emergencies in the Home—Gellis 837
Pertussis, Increased Incidence and Death Rate of Diphtheria and—Dwyer 30
Pettis County Holds Doctors' Day 373
Physical Therapy Association 220
Physician and Easter—Special Article—Duncan 283
as a Citizen—Special Article—Mayerberg 361
Pneumothorax Complicating Pneumoperitoneum Therapy—Case Report—Lawton 199
Poisoning, Carbon Tetrachloride—Allebach and McPhee 106
Postgraduate Reviews—
Current Thoughts on Cardiovascular Therapy—Falk .. 931
Hyperthyroidism: Present Concepts in Treatment—Jackson 777
Management by the General Practitioner of Emotional Problems in Children—Hirschberg 853
Medical Aspects of Emotional Immaturity in the Young Adult—Haddock 349
Pancreatic Insufficiency—Bryan, Casberg and Knight 115
Principles of Geriatric Medicine—Kountz 691
Recent Advances in Thyroid Physiology and Treatment—Lerman 35
Selection of the Far Advanced Cancer Patient for Roentgentherapy—O'Donoghue 419
Surgical Management of Hypersplenism—Zollinger ... 193
Trichlorethylene Analgesia nnd Anesthesia in Obstetrics and Minor Surgery—Brown and Fehlman 609
Use of Radioactive Iodine in the Diagnosis and Treatment of Hyperthyroidism—Mack 267
Potter, Thompson E.—Concomitant Pyloric Obstruction and Perforation With a Suggested Method of Treatment—Case Report 863
President's Comments 16, 96, 176, 256, 336, 408, 592, 672, 752, 832, 912
Principles of Geriatric Medicine—Postgraduate Review—Kountz 691
Professional Relations Between Physicians and Psychologists—Special Article—Muether 205
Progress Notes of Prepayment Plans 14, 94, 170, 334, 664, 748, 832, 910
Progressive Medical Education—Special Article—Pullen 783
Prostatectomy, Diagnosis of Early Carcinoma of the Prostate and Its Treatment by Radical Perineal—Case Report—Melick and Naryka 695
Pullen, Roscoe L.—Progressive Medical Education—Special Article 783
Pyloric Obstruction, Concomitant, and Perforation With a Suggested Method of Treatment—Case Report—Potter 863

R

Radioisotopes, Application of, to Clinical Practice—Statland and Rubin 848
Ramsey, R. H., and Key, J. Albert—Use of Hydrocortisone (Compound F) by Local Injection in Arthritis and Allied Conditions 604
Readers' Review 102, 121, 190, 256, 346, 416
Recent Advances in Thyroid Physiology and Treatment—Postgraduate Review—Lerman 35
Regular Army Physicians May Now Resign 796
Rehabilitation Service in a General Hospital, Introduction for Physicians to an In-Patient—Machek 414
Responsibilities of the Medical School to the State It Serves—Wescoe 841
Rheumatic Diseases, Hydrocortisone Acetate for Local Treatment in—Zuckner 687
Rubin, Sidney, and Statland, Harry—Application of Radioisotopes to Clinical Practice 848
Ruby, Robert H.—Giant Benign Ulcer of the Duodenum—Case Report 357
Rutledge, Randolph, et al.—Abdominal Trauma 918
Rx: Common Sense 796, 886, 960
Ryan, Robert E.—Fiorinal for Sympathetic Treatment of Nonvascular Headaches 259

S

Sappington, John, M.D.—Special Article—Hall 941
Saxton, John A., and Harrison, L. B.—Weber-Christian Disease: Report of Two Cases Treated With Cortisone—Case Report 427
Selection of the Far Advanced Cancer Patient for Roentgentherapy—Postgraduate Review- O'Donoghue 419
Sex and Modern Medicine 66
Shoulders, Harrison H., Jr.—Esophageal Leiomyomas: Surgical Treatment—Case Report 49
Smith, Robert W., and Berry, Paul T.—Ulcers: Three Times Perforated—Case Report 51
Snake Bite, Technic for Using Suction in Cases of—Grayson 763
Soule, Samuel D.—Estradiol 17-Cyclopentyl-Proprionate 345
Special Articles—
Financial Planning for Members of the Medical Profession—Trachtman 129
First—H'Doubler 866
Good Physicians, Good Citizens—Benson 435
How Much Is "Some" Government?—Friedl 206
Hygeia—Today's Health—Bauer 701
Is Present Civil Defense Planning Realistic?—Hungate 621
Keeping the Record Straight in Medical Civil Defense Planning and Operation—Hungate 702
Misconceptions Concerning Nuclear Explosions—Hungate 431
Our Outlook—Banta 622
Physician and Easter—Duncan 283
as a Citizen—Mayerberg 361
Professional Relations Between Physicians and Psychologists—Muether 205
Progressive Medical Education—Pullen 783
Sappington, John, M.D.—Hall 941
Starkloff, Gene B., et al.—Abdominal Trauma 918
Statland, Harry, and Rubin, Sidney—Application of Radioisotopes to Clinical Practice 848
Surgical Decompression of the Gasserian Ganglion and the Posterior Root of the Trigeminal Nerve in the Treatment of Trigeminal Neuralgia—Woolsey and Tsang 99
Management of Hypersplenism—Postgraduate Review—Zollinger 193

T

Tarsus Bones, Injuries to—Diveley and Kiene 595
Technic for Using Suction in Cases of Snake Bite—Grayson 763
Thoughts on Therapy 644
Thyroid Function, Laboratory Tests of—Blackburn 678
Physiology and Treatment, Recent Advances—Postgraduate Review—Lerman 35
Trachtman, Joseph—Financial Planning for the Medical Profession—Special Article 129
Translumbar Aortography in Infants Using 70 Per Cent Urokon as a Contrast Medium—Melick, Boler and Black 179
Treatment of Acute Myocardial Infarction—Bernreiter 762
of Chronic Constipation in Children—Burke 343
of Congestive Heart Failure—Jones 844
of Periungual Warts—Halpern 765
Trichlorethylene Analgesia and Anesthesia in Obstetrics and Minor Surgery—Postgraduate Review—Brown and Fehlman 609
Tsang, John L. K., and Woolsey, R. D.—Surgical Decompression of the Gasserian Ganglion and the Posterior Root of the Trigeminal Nerve in the Treatment of Trigeminal Neuralgia 99
Tumors, Diagnosis of Pelvic—Mixson 684
Tureen, Louis L., and Hahn, Andrew L.—Neurologic Complications of Chronic Alcoholism 766

U

Ulcers: Three Times Perforated—Case Report—Smith and Berry 51
Urethra, Cortisone in the Treatment of Strictures of the Human Male—Byrne 23
Urography, Clinical Experiences With a New Medium in Intravenous—Byrne and Melick 599
Urokon as a Contrast Medium, Translumbar Aortography in Infants Using 70 Per Cent—Melick, Boler and Black 179
Use of Hydrocortisone (Compound F) by Local Injection in Arthritis and Allied Conditions—Ramsey and Key 604
of Radioactive Iodine in the Diagnosis and Treatment of Hyperthyroidism—Postgraduate Review—Mack ... 267
of Suppositories in the Treatment of Hereditary Cephalalgia—Charles 186

V

Venous and Lymphatic Channels, Management of Chronic Obstruction of—Campbell 675

W

Warts, Treatment of Periungual—Halpern 765
We Go to Press 64
Weber—Christian Disease: Report of Two Cases Treated With Cortisone—Case Report—Harrison and Saxton .. 427
Wescoe, W. Clarke—Responsibilities of the Medical School to the State It Serves 841
Wolffe, Joseph B., and Dale, Anthony D.—Digilanid as Compared to the Powdered Leaf of Digitalis in Congestive Cardiac Failure 32
Woolsey, R. D., and Tsang, John L. K.—Surgical Decompression of the Gasserian Ganglion and the Posterior Root of the Trigeminal Nerve in the Treatment of Trigeminal Neuralgia 99
What Is Your Hobby, Doctor? 12, 92, 172, 252, 332, 404, 586, 666, 746, 826, 906
With Our G. P.'s 8, 88, 168, 248, 328, 400, 584, 664, 744, 824, 904
White, Charles H.—Importance of Anesthesia Technics in the Poor Risk Patient 922

X

Xanthine Calculus—Case Report—Mackey 617

Y

Your Patients Hear and See 64, 215, 375, 436, 642, 787
Your Patients Read 64, 126, 231, 373, 443, 724

Z

Zollinger, Robert M.—Surgical Management of Hypersplenism 193
Zuckner, Jack—Hydrocortisone Acetate for Local Treatment in Rheumatic Diseases 687

BOOK REVIEWS

TEXTBOOK OF ORTHOPEDICS, by M. Beckett Howorth, M.D. Clinical Professor of Orthopedic Surgery, New York University Post-Graduate Medical School, in association with Fritz J. Cramer, M.D.; A. Wilbur Duryee, M.D.; Donovan J. McCune, M.D.; J. William Littler, M.D., and Walter A. Thompson, M.D. Illustrated. Published by W. B. Saunders Co., Philadelphia and London. Price $16.00.

The author states in the preface that the book is an outgrowth of more than twenty years experience in practice and in teaching orthopedic surgery at the New York Orthopedic Hospital, Columbia Presbyterian Medical Center and the Teachers College and the Roosevelt Hospital. The subject matter of the book comes largely from the lectures delivered to medical students of the medical schools and those delivered to interns, graduate and undergraduate nurses, physical therapists and teachers of physically handicapped children. Obviously, this book takes the form of a textbook suitable for use in medical schools.

The purpose of the book is to provide the basic facts or etiology, pathology, diagnosis and treatment of those conditions and diseases appertaining to the musculoskeletal system. The book, in addition to serving as a text for the undergraduate medical student, contains much of interest to the experienced orthopedic practitioner but is not intended to be a complete book on technics for the use of the practicing orthopedist.

The first portion of the book deals with basic principles. The history of orthopedics is given, then the basic anatomy and a chapter is devoted to diagnosis and examination and one to fundamental principles of treatment. The second portion deals with regional orthopedics and the third part discusses orthopedic disorders.

The text seems to be somewhat advanced and in considerable detail to be used as a basic text for orthopedic surgery as taught in present day medical schools. The book will serve admirably the third and fourth year medical student and the intern who has developed an interest in the field. The orthopedic resident and the practicing orthopedic surgeon will find the book helpful as a reference book. L. E. R.

SYNOPSIS OF PATHOLOGY by W. A. D. Anderson, M.D., Professor of Pathology, Marquette University School of Medicine; Pathologist, St. Joseph's Hospital, Milwaukee, Wisconsin. With 334 Text Illustrations and 13 Color Plates. Third Edition. C. V. Mosby Company, St. Louis. 1952. Price $8.00.

Most physicians are already familiar with Anderson's previous editions of this text, and they will be pleased to note that he has added to this current third edition the recent information concerning the pathology of lupus erythematosus and the associated L-E phenomenon as well as other problems which are currently the objects of much attention in medical investigations.

Brief discussion of the criteria for the diagnosis of malignancy on exfoliated cells is included. Other newly added entities include pulmonary adenomatosis, renal papillary necrosis in diabetes mellitus, thrombotic thrombopenic purpura and beryllium granulomatosis.

The same straightforward brevity of presentation as before is still appreciated, and the numerous photographs of gross and microscopic pathology illustrate the description of diseases.

For the busy physician who yet wishes to keep abreast of the basic science of pathology and understanding of disease processes, this text can scarcely find an equal. L. E. S.

IF... WHEN... WHERE...

Spasm of Smooth Muscle causes Pain or Dysfunction

OCATRAL®

An effective Antispasmodic and Sedative Minus the toxic side effects.

FOR USE IN

Hypermotility of Peptic Ulcer Cases and Hyperacidity — Dysmenorrhea — Biliary Colic — Pyloro-spasm — Colitis — Angina Pectoris — Renal Colic — Tenesmus — Enuresis — Hypertension — Bronchial Asthma

Each Bisected, Green-colored, Ocatral Tablet contains:

Hyoscyamine	0.1 mg.
Atropine sulfate	0.02 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

Suggested Dosage: ADULTS, 1 or 2 tablets three times daily (up to 9 tablets daily can be taken without toxic effects)

CHILDREN, 1 tablet 2 or 3 times daily. INFANTS, ½ tablet 2 or 3 times daily, as necessary.

AT PRESCRIPTION DRUGGISTS OR DIRECT FROM

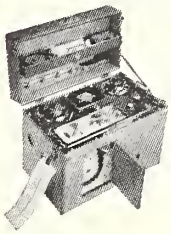
O'CONNELL BROS. INC.
Ethical Pharmaceuticals
1929-31 O'Connell Ave. St. Louis 14, Mo.

TAKE ADVANTAGE OF YOUR LOCAL SANBORN SERVICE STATION

It stands ready to provide you with

- expert technician service on all Sanborn instruments
- emergency loan Sanborn instruments
- complete stocks of daily-use supplies and accessories

and to demonstrate



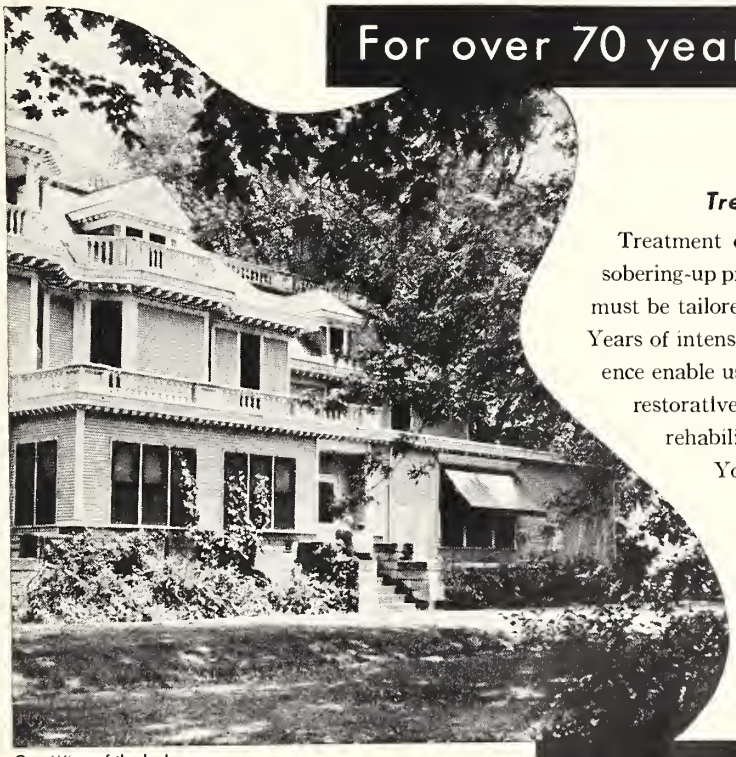
THE SANBORN **VISO** CARDIETTE

today's foremost electrocardiograph

Your local Service Center is:

SANBORN COMPANY *Branch Office*
634 North Grand Boulevard
St. Louis, Mo., *Phone* **Lucas 7740**

For over 70 years...



One Wing of the Lodge

Specialists in the Treatment of Alcoholic Addiction

Treatment of the "problem drinker" is more than a sobering-up process; it is a rehabilitative procedure which must be tailored to the needs of the individual.

Years of intensive research and specialized clinical experience enable us to follow through in all phases of modern restorative treatment—gradual withdrawal, physical rehabilitation, re-orientation and re-education.

You may refer female as well as male patients —we are also equipped to care for narcotic or barbiturate addiction. Moderate rates; treatment period sometimes shortened to just two weeks.

Registered by the American Medical Assn.
Member of the American Hospital Assn.

We invite your inquiry

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS

BOOK REVIEWS

CORRELATIVE NEUROANATOMY AND FUNCTIONAL NEUROLOGY by Joseph J. McDonald, M.D., Professor of Surgery, Columbia University; Attending Surgeon, Presbyterian Hospital, New York; Director of the Surgical Service, Francis Delafield Hospital, New York; and Joseph G. Chusid, M.D., Attending Neurologist, St. Vincent's Hospital, New York. Sixth Edition. Lange Medical Publications, Los Altos, Calif. Price $4.00.

This is a popular handbook in which the anatomic presentation of each structure or system is followed by a neurologic discussion. The arrangement helps the student of neurology think in anatomic terms and therefore facilitates the localization of lesions, a process which is probably more important in neurology than in any other specialty. Of particular value are the excellent diagrams and photographs found in abundance throughout the book.

Chapter 1, consisting of only two pages, gives a brief but adequate discussion of embryology of the central nervous system. Chapter 2 presents in thirty-two pages a thorough anatomic, physiologic and pathologic discussion, vividly illustrated, of all the structures that make up the brain. An excellent physiologic discussion of the cerebral circulation is also found at the end of this chapter.

The section covering the spinal cord is not so well illustrated as it might be and the diagrams of the spinal pathways are confusingly crowded. This is offset by other diagrams of the cord in the part of the book dealing with sensations.

Chapters on cranial, spinal and peripheral nerves are particularly good and the diagrams clearly explained. Peripheral nerve lesions are described and illustrated in detail.

An entire chapter is devoted to muscle innervation and testing. There is some repetition of peripheral nerve material but the charts are quite complete. The illustrations on individual muscle testing are among the best in any book on neurology.

Much new material has been added in this edition, especially on aphasia, headaches and syncope. Brief discussions are found of the electroencephalogram and electromyelogram with tracings of the former from actual cases. In fact, the authors have packed into this little book every conceivable neurologic affection. An excellent list of neurologic signs and syndromes is included at the end. The concise outline format allows a wealth of material to be included without making the volume burdensome. At the same time it makes more difficult reading than simple prose. This is not helped by the print itself, which is smaller than that usually encountered. The merits of the book, however, far outweigh its faults and it is highly recommended for students of neurology and all medical libraries. W. Q.W.

ELECTROCARDIOGRAPHY IN PRACTICE by Ashton Graybiel, M.D., Captain, Medical Corps, United States Navy, Director of Research, United States Naval School of Aviation Medicine, Pensacola, Florida; Paul D. White, M.D., Executive Director, National Advisory Heart Council, Consultant in Medicine, Massachusetts General Hospital; Louise Wheeler, A. M., Executive Secretary, the Cardiac Laboratory, Massachusetts General Hospital; and Conger Williams, M.D., Instructor in Medicine, Harvard Medical School; Associate Physician, Massachusetts General Hospital. Third Edition with 294 figures. W. B. Saunders Company, Philadelphia. 1952. Price $10.00.

Since the second edition some six years ago, the present revision has been prepared to include unipolar leads for the limbs and chest; and, also vector method of theoretic appreciation and advanced interpretation. The method of presentation chosen continues to be in the handy atlas form.

The subject matter is taken up under the usual headings common to most books on this subject, but the illustrating records are analyzed step by step. Case histories are given to further correlate electrocardiographic interpretation with clinical events in the life history of etiologic heart disease.

Part V, dealing with effects of drugs on the electrocardiogram, is valuable indeed.

In Chapter 21 on "Coronary Heart Disease," the patterns presented for myocardial infarction include anterior, anteroseptal, lateral, anterolateral, posterior, posterolateral, anteroposterior, posterioseptal and subendocardial infarctions. It is no longer enough to just recognize "anterior" or "posterior" lesions, but precise localization and estimate of extent of the lesion are proving of value in prognosis and in planning convalescence. In this chapter, infarction and bundle branch block, ventricular aneurysm and atypical myocardial infarctions are carefully discussed and well illustrated.

Finally, Part VIII contains "unknowns" for practice interpretation.

This text can be heartily recommended as a practical, up to date, clearly presented and readily understandable treatise on the clinical aspects of electrocardiographic interpretation. It would be difficult to name any single book on electrocardiography as "the best and only text needed," but rather it can be stated fairly, as well as emphatically, that this is one of three textbooks on the subject which could constitute a "basic EKG library" of inestimatable worth. This text is selected for its value in clinical electrocardiogram interpretations by pattern method, one book devoted to the theory of vectorcardiography such as Hurst's should be selected and another book for its explanation of the derivation of patterns by the vector method (Dimond). F. S. M.

STANDARD VALUES IN BLOOD. Being the first fascicle of a Handbook of Biological Data. Edited by Errett C. Albritton, A.B., M.D., Fry Professor of Physiology, George Washington University. Prepared under the Direction of the Committee on the Handbook of Biological Data, American Institute of Biological Sciences, The National Research Council. Philadelphia. W. B. Saunders Company. 1952. Price $4.50.

This is a volume compiled by the National Academy of Sciences—National Research Council, contracted for by the Wright Air Development Center, United States Air Force, for the purpose of gathering and compiling for publication the more basic established data on the compositions and reactions of blood. This work was entrusted to the Committee on the Handbook of Biological Data, an organ of the American Institute of Biological Sciences. This Institute is affiliated with the National Research Council at a unit in the Council's division of biology and agriculture.

CLASSIFIED ADS

BERNARD NURSING HOME accepts patients who are chronically ill, aged or invalided, and convalescents, whose primary need is good nursing care. Our staff is open to all accredited physicians. Facilities are available for low voltage muscular and nerve stimulation in paralytics, chronic arthritics, etc. Our home is beautifully furnished, centrally located, equipped with automatic sprinkler system, and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo., Telephone Lucas 9290.

WANTED: General Practitioner, to become permanently associated in long-established general practice, including part industrial work, with older GP not now having assistant, Kansas City, Mo. Terms and arrangements flexible. Write Box 190, Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

FOR SALE—Complete doctor's office and equipment located at 207a North Kirkwood Road, Kirkwood, Mo. For details call Mrs. C. E. Bennett, TErryhill 3-7953.

FOR RENT OR SALE—Large established practice. Office fully equipped. With or without equipment. North Grand Boulevard, St. Louis. For information call NEwstead 7298 between 9 and 12 a.m. Dr. Brockelmann.

FOR SALE—Operating chair, treatment chair, Gomco Suction and Treatment Unit and various ENT instruments and office equipment. Also a library of medical books including some on anatomy. For information please contact Mrs. C. P. Fordyce, 2522 Mulberry St. Joseph, Mo. Phone—2-5215.

FOR SALE—Large, brick clinic building on lot 95x180. Full basement partitioned into 4 rooms and kitchen—all concrete and dry at all times. First floor—entrance hall, large reception and waiting room with sun porch glass inclosed. Private office, x-ray and dark room, two large treatment rooms. Second floor—corridor full length of building, 3 double rooms and 1 single room. Natural gas heating unit furnace, air conditioned. All in good repair. Contact S. E. Mitchell, M.D., Malden, Mo.

The Norbury Sanitarium

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

Frank Garm Norbury, A.M., M.D., Medical Director

Samuel N. Clark, M.D., Physician

Henry A. Dollear, M.D., Physician

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

PROFESSIONAL PROTECTION EXCLUSIVELY SINCE 1899

specialized service assures "*know-how*"

ST. LOUIS Office
Erwin H. Wahl, Rep.,
3738 Washington Blvd.
Telephone Newstead 8363

In very special cases
A very superior Brandy

Specify 84 PROOF

★ ★ ★

HENNESSY

THE WORLD'S PREFERRED
COGNAC BRANDY

For a beautifully illustrated book on the story of Hennessy, write—

Schieffelin & Co., Dept. HT, 30 Cooper Square, N.Y. 54

INDEX TO ADVERTISERS

Abbott Laboratories 900, 954-955
Ayerst, McKenna & Harrison, Ltd. 913

Bilhuber-Knoll Corp. 901
Blue Cross-Blue Shield 930, 943

Camel Cigarettes 905
Canada Dry Ginger Ale, Inc. 940
Chicago Medical Society 937
City View Sanitarium 936
Cook County Graduate School 952

Eaton Laboratories 958-959

Fairmount Hospital 936
Fruit Dispatch Company 951, 952

Hamilton-Schmidt Company 965

Keeley Institute 969
Kent Cigarettes 971
Knox Gelatine Company 940

Lederle Laboratories ..... Insert
Eli Lilly and Company 914

Mead Johnson & Company 976
Medical Protective Company 961
Merck & Company 911
Milwaukee Sanitarium 937

Neurological Hospital 965
Norbury Sanatorium Co. 973
North Shore Health Resort 972

O'Connell Bros., Inc. 969

Parke, Davis & Company 898-899
Chas. Pfizer & Company, Inc. 975
Physicians Casualty Association 972
Mary Pogue School 965

Quincy X-ray and Radium Laboratories 965

Ralph Sanitarium 938
Research Clinic 950

Sanborn Company 969
Schieffelin & Co. 973
G. D. Searle & Co. 929
E. R. Squibb & Sons 909

U. S. Brewers Foundation, Inc. 928
University of Kansas Medical Center 974
Upjohn Company 903

West Texas Maternity Hospital 965
Winthrop-Stearns, Inc. 907

Zemmer Company 965

Hair Permanently Removed by Electrolysis

DOROTHY WORRELL, R.N.

233 N. Vandeventer, St. Louis
Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

MISSOURI MEDICINE

The Journal of the Missouri State Medical Association

Address all communications to Missouri Medicine, 623 Missouri Theater Building, 634 North Grand Avenue, St. Louis 3. Telephone: Newstead 0404-0405.

Subscription: $3.00 per year; 40 cents per copy.

CONTRIBUTIONS

R. O. Muether, M.D., Editor of Scientific Material

Articles are accepted for publication on condition that they are contributed solely to this journal.

Material appearing in THE JOURNAL is covered by copyright. Permission will be granted on request for reproduction in reputable publications, provided proper credit is given.

Manuscripts should be typewritten, double spaced and the original, not the carbon copy, submitted. Foot notes and bibliography should conform to this order: name of author, title of article, name of periodical, with volume, page, month (day of month if weekly) and year. Used manuscripts are not returned.

Halftones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table or chart should bear the author's name on the back. Photographs should be clear and trimmed so that only the pertinent part is submitted. Drawings should be made in India ink on white paper. Used illustrations are returned to author after publication only when requested.

POSTGRADUATE COURSES
in
RADIOLOGY
February 15, 16 & 17, 1954

Guest Instructors:

JOHN P. CAFFEY, M.D., Columbia University.
HAROLD W. JACOX, M.D., Columbia University.
EARL R. MILLER, M.D., University of California.
CLYDE A. STEVENSON, M.D., Scott-White Clinic.
HARRY M. WEBER, M.D., The Mayo Clinic.

PEDIATRICS
March 15, 16 & 17, 1954

Guest Instructors:

RUSSELL J. BLATTNER, M.D., Baylor University.
J. ROSSWELL GALLAGHER, M.D., Harvard University.
CHARLES E. KOOP, M.D., University of Pennsylvania.

Courses for Allied Groups

MEDICAL TECHNOLOGY—3 days, January 11 to 13
NURSING—3 days, February 8 to 10
HEARING AND SPEECH CONFERENCE—2 days, February 26 & 27

For program announcement and information, write:

Extension Program in Medicine
UNIVERSITY OF KANSAS SCHOOL OF MEDICINE
Kansas City 12, Kansas

42608

Missouri medicine.
AUTHOR

v.50, 1953
TITLE

Missouri medicine
v.50, 1953

42608

DATE DUE

FEB 2 4 '59